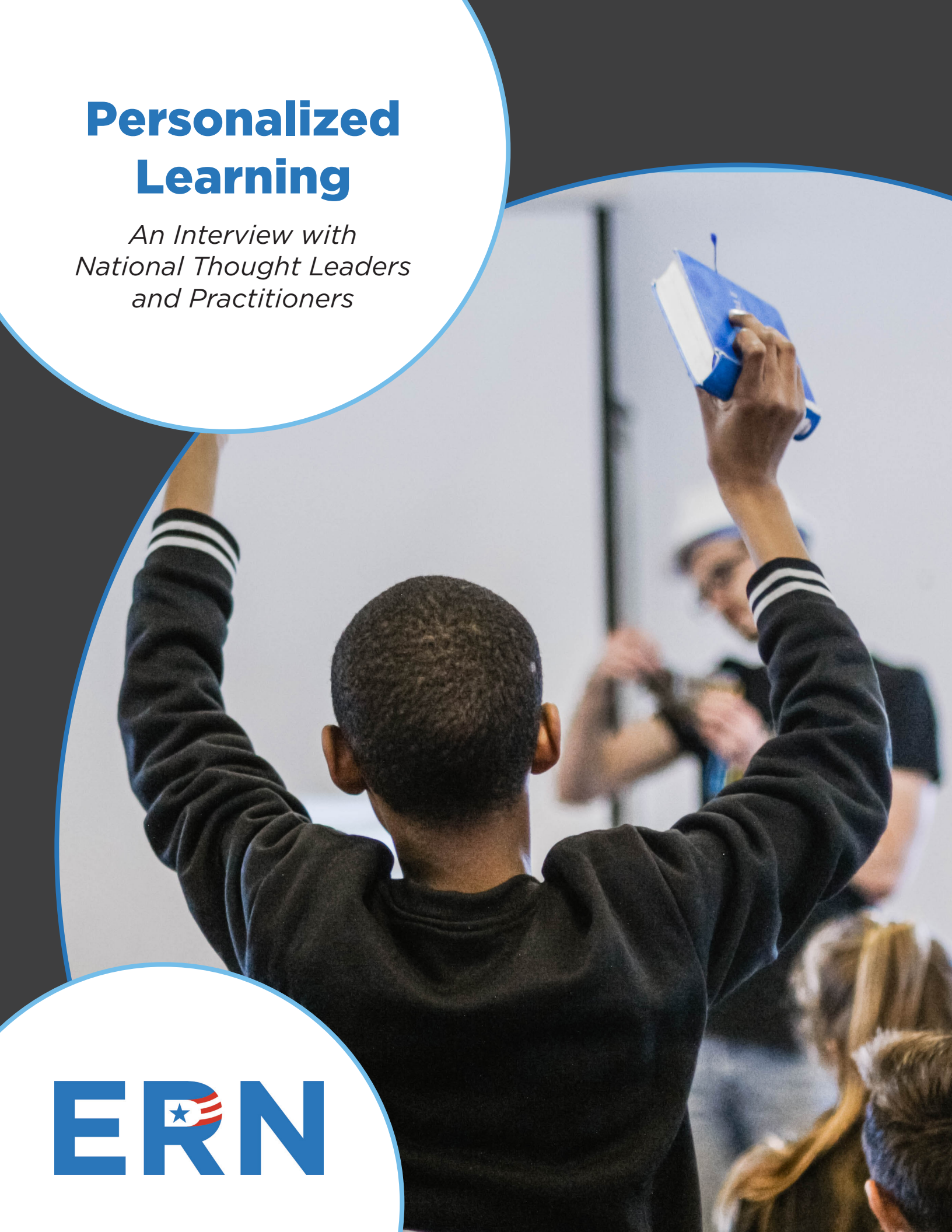


Personalized Learning

*An Interview with
National Thought Leaders
and Practitioners*

A photograph of a student from behind, wearing a dark hoodie, raising a blue book high in the air with both hands. In the background, another student in a white hard hat is visible, and the setting appears to be a classroom or workshop.

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Susan Patrick

*President & CEO
Aurora Institute (iNACOL)*

Susan Patrick is the President and CEO of the Aurora Institute (formerly iNACOL) and Co-Founder of CompetencyWorks, providing policy advocacy, publishing research, developing quality standards, and driving the transformation to personalized, competency-based education forward.

She is the former Director of the Office of Educational Technology at the U.S. Department of Education, and served as legislative liaison for Governor Hull from Arizona. She also served as legislative staff on Capitol Hill.

Patrick holds a master's degree from the University of Southern California and a bachelor's degree from Colorado College. She is a Pahara-Aspen Fellow and was awarded an Eisenhower Fellowship in 2016 to study global education systems transformation policies and best practices.



Julia Freeland Fisher

*Director of Education
Clayton Christensen Institute*

Julia Freeland Fisher is the director of education research at the Clayton Christensen Institute. She leads a team that educates policy-makers and community leaders on the power of disruptive innovation in the K-12 and higher education spheres through its research.

Julia is the author of *Who You Know: Unlocking Innovations That Expand Students' Networks* (Wiley, 2018). The book focuses on emerging tools and practices that leverage technology to radically expand who students know—their stock of “social capital”—by enhancing their access to and ability to navigate new peer, mentor, and professional networks.

Julia has published and spoken extensively on trends in the Ed-Tech market, blended learning, competency-based education, and the future of schools. Julia's writing has appeared in outlets including *Education Next*, *Forbes*, *entrepreneur.com*, the *Chicago Sun-Times*, and *CNN*.

Prior to joining the Institute, Julia worked at NewSchools Venture Fund. She also served as an instructor in the Yale College Seminar Program. Julia holds a bachelor's degree from Princeton University and a JD from Yale Law School.



Beth Rabbitt

*CEO
The Learning Accelerator*

Beth Rabbitt is Chief Executive Officer of The Learning Accelerator (TLA). She is a nationally recognized expert in education innovation and blended and personalized learning. Prior to becoming CEO in 2016, Beth was a Partner on TLA's start-up team, leading the organization's work to develop educator training systems and researching emerging teaching and learning models and practices.

Before joining TLA, Beth was a Doctoral Resident and Director of Human Capital and Innovation at a school in Newark, NJ, where she developed and completed research on competency-based approaches to teacher professional learning. Prior to that, she was an Associate Partner at the NewSchools Venture Fund, a consultant to and with Education Resource Strategies, and the founding Doctoral Fellow at the Harvard Innovation Lab.

Beth serves on the board of several education nonprofits, including the Highlander Institute, Catalyst:Ed, and InnovateEDU. She earned a B.A. from Dartmouth College and a Doctorate in Education Leadership (Ed.L.D.) from Harvard University.

In November of 2018, at Education Reform Now's annual Camp Philos conference in Boulder, Colorado, a distinguished panel of national personalized learning experts and practitioners shared their views on a wide range of topics including the evolving definition of personalized learning (PL), common misconceptions of PL, best practices, and next generation assessments and accountability. A year later, we're revisiting and updating that informative and provocative discussion here with:

Julia Freeland Fisher, Director of Education, Clayton Christensen Institute

Susan Patrick, President & CEO, Aurora Institute (iNACOL)

Beth Rabbitt, CEO, The Learning Accelerator

Interviewed by **Charles Barone**, Chief Policy Officer, Education Reform Now

Charles Barone: Personalized learning seems to have different meanings and connotations for different people. What is your definition of personalized learning?

Susan Patrick: The Aurora Institute's (formerly iNACOL's) field-tested definition of [personalized learning](#) is "tailoring learning for each student's strengths, needs and interests—including enabling student voice and choice in what, how, when and where they learn—to provide flexibility and supports to ensure mastery of the highest standards possible."

Personalized learning is an approach to a school's pedagogical strategy for optimizing supports for each student, drawing on research about learning, motivation and engagement. Schools that personalize learning call on students to be active co-constructors, making choices in how they learn, co-creating their learning experiences and pathways through learning, progressing through content as they demonstrate competence, and engaging in their communities outside the school. This stands in contrast to prior expectations that all students should progress

along a set curriculum at roughly the same pace, and significantly advances more recent differentiation work by placing student agency at the center of the process.

The relationship between personalized learning and competen-

cy-based education is an important one. Having choice in what students learn can coexist with having rigorous, common expectations for learning, because some competencies can be demonstrated via a range of content, and students may choose to exceed required levels of competency.

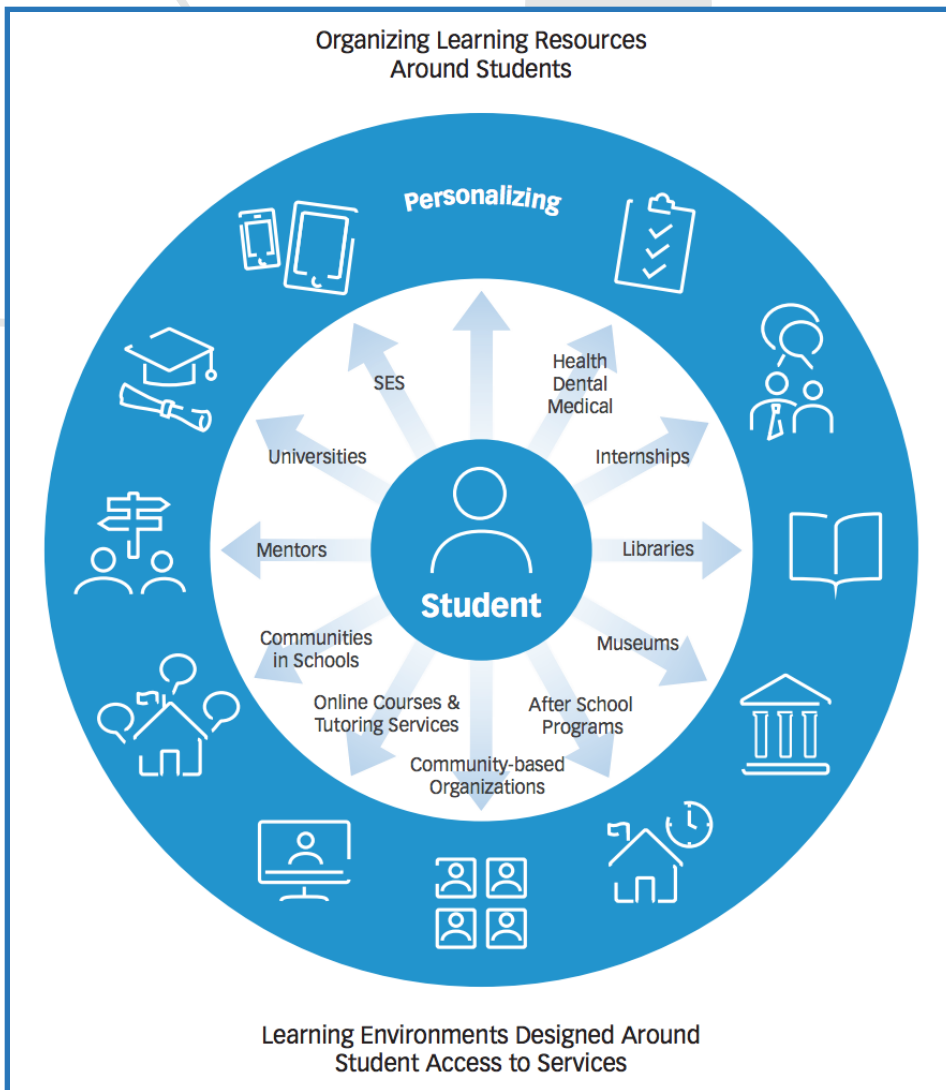
Competency-based education systems provide structures that foundationally are important to support personalized pathways—and at the same time—ensure equity (through mastery). Building knowledge and skills is key, and competency-based structures form the foundation of equity for all students, with an expectation for demonstrating mastery through evidence. They also ensure that personalization does not reinforce traditional, inequitable structures such as tracking or variable outcomes resulting in gaps in learning (variable amounts of learning in consistent blocks of time). A shift from a one-size-fits-all time-based system, to a system organized around every student learning the knowledge and skills is critical to prepare our youth for their futures.

Note: The views presented in this report are those of the interviewees and are not meant to be an endorsement or statement of support for any particular policy.

"Having choice in what students learn can coexist with having rigorous, common expectations for learning, because some competencies can be demonstrated via a range of content." –Susan Patrick

Beth Rabbitt: The Learning Accelerator’s (TLA) definition for personalized learning, which has largely stayed the same over the last four years, is a student-centered instructional approach that individualizes learning for each student based on strengths, needs, interests, and/or goals. It allows for differentiation of path, pace, place, or modality and creates greater opportunities for student agency and choice-making. Personalization can happen in any domain of learning—whether it be academic, social-emotional, cognitive, physical, etc.

We think that personalization is one strategy that lives alongside others equally important for high-quality learning and implementation, such as: mastery-based learning, effective use of data, and integration of technology. Personalization is one piece of the puzzle.



Julia Freeland Fisher: We should be talking about personalizing as a verb, not a noun. One thing that has tripped us up as a field is this idea that personalized learning is a thing versus a set of practices that take the best of differentiated instruction and actually meet each individual student where he or she is. If we think of it as a noun, we’re always searching for a static set of practices rather than embracing the idea that personalizing is a process that is constantly responsive both to what’s happening inside the classroom and to the range of academic and non-academic variables that contribute to learning.

CB: *So is it anything now? Can anything be put in the category?*

JFF: It’s definitely broad. But I think there are discrete categories of new practice within the broader concept of personalizing learning. If you think about what it will take to build a system that personalizes to each student, you end up seeing what we refer to in innovation terms as a “value

network.” In other words, you need different resources and processes across a range of dimensions—not just new approaches to instruction, but also different staffing structures, different assessment models, even different buildings and infrastructure. To bring some discipline to that conversation so it’s not just “let a thousand flowers bloom”, I think we need to be having robust conversations about the outcomes you hope a more personalized approach can create. Measurement can in turn be the narrowing mechanism: if we’re measuring at the level of individual student mastery, we can tell whether we are successfully personalizing to students’ needs. Otherwise you’re right—personalized learning could just be a catch all for an endless set of “new” inputs producing variable outcomes.

SP: The LEAP Innovations personalized learning framework provides a more detailed and excellent resource for examining the elements and characteristics of personalized learning—for what it is and isn't. Personalized learning is really

“Personalization is one strategy that lives alongside others equally important for high-quality learning and implementation... Personalization is one piece of the puzzle.” –Beth Rabbitt

about learning designed “per person”—for each student to have pathways for learning knowledge and skills required for success. In a school, this means student-centered pedagogy, personalized approaches, with an expectation of mastery—and being able to have relevant, meaningful, cultur-

ally responsive and purpose-based or challenge-based learning experiences that align with the research on how students learn best to foster motivation.

What does conventional wisdom have wrong about personalized learning?

BR: First, that it's a new concept. People have been attempting to personalize for hundreds of years. David Dockterman's [piece in Nature](#) is still one of the best I've read on the real origins of efforts to personalize.

Second, that it is technology driven. Personalization is not about algorithms controlling learning paths. Instead, it's about individualizing pathways, interventions, and opportunities, with a focus on giving each child what they need to achieve. Technology can support teachers in doing that, particularly at scale.

Third, that personalization is only about individual instruction. Clearly, humans learn socially, and that meeting the “personal” needs of any learner will require engagement with others within a socially supportive environment.

**“Adaptive educational software that enables flexible pacing but minimizes the role and richness of the teacher and the classroom environment has also been incorrectly equated with personalized learning.”
–Susan Patrick**

JFF: I think there's been a dangerous presumption that diligently reworking academics alone is going to solve achievement gaps, despite the fact that we know that factors like poverty erect major barriers to learning.

We can't ignore that students are arriving at school with non-ac-

ademic barriers to learning that the system may need to address. That's a piece that got over simplified at the beginning of the personalized learning movement. Luckily, leading funders are now trying to address those non-academic barriers as well. For example, you can see attempts to address this reflected in the CZI [Chan Zuckerberg Initiative] whole child framework to a degree. I think it successfully broadens the aperture of what sorts of resources and interventions need to be in place if personalized learning is going to address achievement gaps.

SP: Personalized learning is too often conflated with technology integration, but it is so much more. Personalization is a redesign of learning approaches for meeting student's needs.

Personalized learning is an approach to ensure students demonstrate mastery on pathways and that all students can succeed at high levels. Educators can use personalized learning tools, such as technology, in order to customize learning to students' needs, but the tool is not an end to itself.

Adaptive educational software that enables flexible pacing but minimizes the role and richness of the teacher and the classroom environment has also been incorrectly equated with personalized learning or proficiency-based learning. Technology products do play important roles in many high-quality competency-based schools, but they are only one part of a comprehensive set of cultural, pedagogical, and structural changes that collectively comprise a personalized, competency-based learning model. Teachers use technology as one of many tools to support student learning and monitor student progress.

“Agency can be seen as having four primary elements: setting advantageous goals, initiating action toward those goals, reflecting on and revising those goals, and internalizing self-efficacy. These four elements are essential for being a successful adult in the modern world.” –Susan Patrick

Stakeholders who are rightly concerned about overreliance on educational technology have unfortunately used this

misconception to criticize personalized learning as a whole or competency-based education. A school is not competency-based simply because students are using adaptive software, have flexible pacing, or are otherwise implementing isolated aspects of competency-based education.

CB: How important, in your view, is student agency to advancing personalized learning?

SP: Student agency is essential for personalized learning approaches.

Agency can be seen as having four primary elements: setting advantageous goals, initiating action toward those goals, reflecting on and revising those goals, and internalizing self-efficacy. These four elements are essential for being a successful adult in the modern world. Moreover, research in the learning sciences demonstrates that when students are giving meaningful agency, they become more motivated and engaged in their education.

BR: Increasing opportunities for student agency is one meaningful goal of personalization. It's not the only goal, but it's an important one in a system in which Gallup has found that two-thirds of 10th graders are actively disengaged in school. Also, as we imagine a world of work that is increasingly remote and gig-based, developing critical skills for self-direction, self-motivation, and self-monitoring (which can't be practiced without some level of agency on the part of the individual), it makes complete sense that we'd want to create opportunities for building those skills via personalization.

JFF: I think of agency as something that a student develops and builds, so in some ways it's an outcome that you'd want to measure personalized learning models against. I think sometimes we get into a slippery slope of talking about it as an input or a thing that can be done to students.

We recently wrapped up a crowdsourcing project looking for innovative schools that are not on the radar of the national conversation right now. It's called The Canopy. Learner agency was the most popular dimension of innovation that got tagged across the schools we identified. We're trying to dig in on what does that actually mean. My gut, looking at that data is that [student agency] is a very popular ambition, but the strategies associated with that have yet to be fully fleshed out. And that may mean that the field defaults to using shorthand like “voice” and “choice,” when really we should be thinking about how to best

measure agency and see whether you are building student agency through a series of instructional innovations in your school.

“As we imagine a world of work that is increasingly remote and gig-based, developing critical skills for self-direction, self-motivation, and self-monitoring—which can’t be practiced without some level of agency on the part of the individual—it makes complete sense that we’d want to create opportunities for building those skills via personalization.”
–Beth Rabbitt

That said I’ve seen some really bright spot schools that have deliberately put students in the driver’s seat, with appropriate guardrails and rigorous assessment, and those should be studied even further. So, one example that comes to mind is a tuition-free private school in Idaho called One Stone. A portion of their board is actually made up of students. So they actually embedded this idea of agency at the highest level—their governance model. They’ve also

invested heavily in assessing agency. So it’s good example of both integrating agency as a core design element and assessing for agency in more rigorous ways.

CB: What structural changes do we need to the way schools are governed to maximize personalized learning?

SP: We think there are five main changes that need to be made structurally:

- 1)** Professional development to enable teachers and leaders to implement the many changes in culture, structure, and pedagogy required for personalized learning and competency-based education;
- 2)** Distributed leadership to empower teachers as leaders with greater discretion to make decisions about the best learning strategies for students;
- 3)** Changes in scheduling to enable varied pacing and different pathways for students rather than all students moving forward at the same pace through the same materials in strictly age-based cohorts;
- 4)** Provision of tools to facilitate personalized learning such as learning management systems, laptops/tablets; and
- 5)** Changes in assessment to permit diverse methods including formative, summative, and performance-based assessment, as well as systems to calibrate learning across teachers.

In order to align governance, goals and structures across the education system, it is important to first define the change we want to see. Communities need to redefine student success more broadly—educators, administrators, parents, students, and community members—toward higher ideals about the purpose of education and create a demand for change. Systemic change starts with communities who challenge the status quo, build a vision for the future of education, and engage in a backward design process around what their hopes are for students.

BR: Purely governance? Few if any. It’s reasonable we can implement personalized approaches within current structures. However, it’s critical that governance bodies understand and cohere around a shared, clearly communicated vision for personalized instruction, providing cover for leaderships’ changes in practice and policy. Governance bodies can also help propagate supportive policies, such as

investment in technology/infrastructure, allocation of funds to innovation projects/training, allow for more flexible uses of resources and staff, and move towards standards-based and competency-based reporting at student level.

“I think of agency as something that a student develops and builds, so in some ways it’s an outcome. ...I think sometimes we get into a slippery slope of talking about it as an input or a thing that can be done to students.” –Julia Freeland Fisher

JFF: Online learning is an interesting lens through which to consider the importance of structural and policy shifts. If we look back at our past decade and ask ourselves: where did digital learning successfully move us towards a more student centered “personalized” system—or system

that personalizes to students’ needs—and where did online learning just end up digitizing our traditional set of practices?

One of the big misses, I think, was that despite some very positive shifts in policy, we continued to fund schools on the basis of seat time and daily attendance. And what that means is that you can have all of sorts of language and ambitions around a new vision of student outcomes, but we have retained the traditional business model of school—which is that you get funded based on whether a student is sitting in his seat in a site-based way. So long as funding remains time-based, I think that we are going to see a lot of these exciting ideas get cannibalized by a traditional operational and organizational structure.

CB: *Are there schools that you’re aware of that have overcome that?*

JFF: One example is VLACs [Virtual Learning Academy Charter School], which is essentially New Hampshire’s statewide virtual school that is partially funded in an outcome-based, competency-based manner. So, they get a portion of their per pupil [funding] when students demonstrate mastery. But that idea of outcomes-based funding, it’s messy. You can’t do a purely outcomes-based funding because you actually need capital upfront to run school. Still, I think VLACS is a promising example of rewarding achievement and not just incentivizing time in seat.

CB: *What roles should each level of government play in advancing personalized learning?*

SP: At the federal level, Congress can launch a pilot program in the reauthorization of the Higher Education Act to encourage the development of innovative, fully competency-based, and personalized teacher and leader preparation programs. Currently, the House Bill the College Affordability Act includes a competency-based demonstration pilot, allowing CBE institutions to seek flexibility from

“It’s critical that governance bodies understand and cohere around a shared, clearly communicated vision for personalized instruction, providing cover for leaderships’ changes in practice and policy.” –Beth Rabbitt

statutory or regulatory regulations. This is an opportunity to incentivize educator preparation programs to train educators and leaders in personalized learning approaches and in competency-based learning environments.

In future reauthorizations, it will be important for Congress to remove barriers for states in ESSA

Section 1204 (Innovative Assessment Pilot) by lifting the seven-state cap, allowing time for planning and scaling, and making funding available for states to develop

and stage implementation of high-quality, innovative systems of assessments that include performance assessments to support competency-based pathways.

At the state level, states can get started by offering seat time waivers and credit flexibility through pilots, innovation zones, and multiple pathways to open space

for learning anytime, everywhere. States can redefine credits based on competencies rather than seat time. States can also redefine student success to support more holistic definitions of success, build educator capacity for teaching and learning in student-centered learning environments, redesign balanced

“One of the big misses, I think, was that as we thought about both the policy climate and the governance structure, we continued to fund schools on the basis of seat time and daily attendance.” –Julia Freeland Fisher

systems of assessments, rethink state education accountability systems, and develop meaningful credentials that certify learning.

CB: What do people on the ground need to do to promote personalized learning?

JFF: The thing I’m keeping an eye on in teacher prep is that there are really promising, disruptive models that are truly reinventing the business model of higher ed, which we would argue is totally broken and leading to the tuition hikes we’ve seen in recent decades, and the fact that we have abysmal alignment with employer needs relative to what we’re teaching in postsecondary programs. You have institutions like Southern New Hampshire University, you have Western Governors University, schools that are really taking the best of online, competency-based instruction but also very sophisticated, data-driven assessment and improvement strategies behind the scenes to reinvent higher education as we know it.

What’s disappointing, however, is that these innovative models are fairly siloed from a separate group of people trying to rethink the content of teacher preparation to prepare more educators to teach in personalized learning environments. So you have this whole conversation about what better teacher prep could look like in one corner, and in a totally different corner you have new business models and pedagogical structures arising. I don’t know what to do about that disconnect, but it’s the frustrating dynamic right now.

“Systemic change starts with communities who challenge the status quo, build a vision for the future of education and engage in a backward design process around what their hopes are for students.” –Susan Patrick

SP: *Shift the Narrative.* Personalized learning isn’t just another reform. It is a re-imagining of the purpose of education, questioning whether our current diplomas actually show what a student knows and can do, lifting up the role of educators in designing the

future, and harnessing the power of parents and students. Personalized learning seeks to rethink our approach to teaching and learning, and to get there, proponents must speak with a clear, unified voice.

See Examples in Action. We estimate between 6-8 percent of schools in the United States are in some stage of implementing new, student-centered, personalized, competency-based learning models. Seeing the model come to life through site visits and professional learning communities for educators is essential to making it real and getting personalized learning off the ground. While there are

AURORA INSTITUTE STATE POLICIES TO SUPPORT PERSONALIZED LEARNING

State Policy Recommendation 1: Align Competency-based Pathways Across K-12, Higher Education, Career/Technical Education and Workforce/Employment

There is an opportunity to target funding within the reauthorized Perkins Career and Technical Education Act to encourage alignment of programs with personalized pathways and competency-based approaches across K-12, higher education, career/technical education and the workforce. This requires a move away from seat-time and shift toward a long-term focus on building the knowledge and skills students need to succeed. Several states have established graduate profiles for K-12 that articulate a shared vision for student success and begin a first step to drive towards coherence in statewide education systems, with Governors and legislatures in states leading alignment across various agencies and constituencies.

- Alabama is conceptually working on early stage planning for developing a “continuous learning system” with competency-based pathways in K-12 education, career technical education, higher education and the workforce. This continuous learning system will have competency-based learning and assessments to credential the development of knowledge and skills needed for credentials and micro-credentials to open pathways.
- Virginia is taking a comprehensive and coherent approach to transforming education, using the Profile of a Virginia Graduate as a powerful driver of transformation of assessment and teaching, which requires each graduate take an AP, Honors or IB course or complete an industry certification.

State Policy Recommendation 2: Create Innovation Zones

Innovation zones are created in state policy to offer school districts “space to innovate” with district schools to develop new models, offer more personalized approaches and competency-based pathways for learning in K-12 education. The Innovation Zones essentially encourage innovation and allow districts to apply for and request waivers or exemptions from outdated regulations and statutes to support implementing modern learning environments.

- In Kentucky’s ten Districts of Innovation, some of the policies that were waived for the innovation zones include seat-time policies, the average daily attendance calculation, and inaccessibility to internships or learning opportunities in communities, after school programs and outside of school walls.
- In Colorado districts of innovation, the Colorado State School Board may waive any statutes or rules specified in a school district’s innovation plan, and Colorado provides additional funding and flexibility to school districts through Student-Cen-

tered Pilot Accountability Systems to provide grants to design new accountability systems.

State Policy Recommendation 3: Launch Competency-based Task Forces

State policy makers can provide thought leadership in their states by creating a space for dialog between policymakers, stakeholders and communities across the state by establishing a formal statewide task force for competency-based education. A CBE task force brings together a group of experts and stakeholders to examine the issue in depth, to consider needs in policy and practice, and to provide recommendations and next steps in a state.

Recommendation 4: Create Competency-based Education Pilots that Prioritize Mastery-based Transcripts

Competency-based education pilots allow states to foster innovation by letting a few school districts test a new way of teaching and learning. This type of policy can provide a catalyst for innovation, revealing longer-term policy solutions necessary to support competency-based education and build plans for scalability.

- Utah's competency-based education pilot program provides grant incentives to LEAs to transform their learning models. Local pilot implementation may begin as soon as 2021.

State Policy Recommendation 5: Pilot Innovative Systems of Assessments Under The Every Student Succeeds Act (ESSA)

The Innovation Assessment Demonstration Authority (IADA) allows participating states to apply to the USED to pilot innovative new systems of assessments in a subset of school districts before scaling state-wide. States may apply on their own or as part of a consortium of up to four states. The best example of a state working on building competency-based pathways is New Hampshire.

States are uniquely positioned to engage communities in conversations to rethink student success along a lifelong learning continuum that expands early learning, K-12 education, career education, higher education and the workforce. The first step for state policy makers is creating space for innovation, including K-12 education, higher education, career and technical education, and workforce training and credentialing. We hope that State leaders will rise to the challenge and begin to chart a course forward to better align public education and workforce training with new pathways and the flexibility needed for students to earn meaningful credentials.

many different approaches, these characteristics are common across most personalized learning classrooms:

- Student-centered learning.
- Engagement beyond the test score.
- Students moving on when they're ready.
- Anytime, anywhere learning.

Professional Development and Buy-In. There is a need for modernizing the teacher workforce for learner-centered, competency-based, equity-oriented education as outlined in our recent [issue brief](#). Personalized, competency-based learning entails changes to fundamental policies, practices and structures, and it challenges many of the core beliefs and assumptions on which the traditional system of education has rested for decades. Inevitably this paradigm shift requires a parallel shift for educators: fundamental changes in teaching conditions and experiences and in the core assumptions that underlie teaching practice.

BR: One, have a very clear vision for what they mean, defining personalized learning in terms of vision and problem to be solved. This is the biggest problem we see as folks adopt personalized learning without any real intentionality.

“Continuing to limit class sizes/demand ratios prevents teachers from working collaboratively. The most exciting emerging models are those where adults can work together via teaming and where we can create alternate pipelines and onboarding structures: apprenticeships, residencies, and master/mentor relationships.” –Beth Rabbitt

Two, communicate, communicate. This is the second biggest problem we see. When things go awry (as they do in *any* implementation of *any* new technical approach or reform), stories get twisted.

And three, ensure teachers are operating in supportive

conditions, including but not limited to the provision functional tools/tech, clear expectations for practices. At The Learning Accelerator, we have done significant research on these operating conditions and recently published a new [framework](#) that not only shares our learning, but crosswalks a bunch of other organizations' change processes and recommendations.

CB: What might policymakers do that would undermine personalized learning?

BR: The dimensions I worry about are:

Limiting staffing flexibility: Continuing to limit class sizes/demand ratios prevents teachers from working collaboratively. The most exciting emerging models are those where adults can work together via teaming and where we can create alternate pipelines and onboarding structures (apprenticeships, residencies, master/mentor relationships) because we don't need to use the 1 teacher to 30 students staffing model.

Unreasonable assessment expectations: Demanding immediate test improvements in year one, or being intolerant to improvement wobbles in years two and three, is unreasonable. Implementing a new approach takes adult time and learning. We can't expect immediate, sustained positive results. Initial focus should be on quality implementation and leading indicators.

Failing to provide guidance on data privacy, security, and interoperability: If we're

going to use tech, we need policy makers to help us put in place supportive policies and infrastructure. There's not been enough work here—but in a world where we want data to drive instructional decision-making, we really need to demand tech providers adhere to standards and make data easy to use and understand so teachers don't have to spend Sunday nights downloading assessment data and sending that data in Excel over email.

We're hearing a lot about "next gen" assessment and accountability systems. Can we do PL within our current assessment and accountability systems? If not, what needs to change? What should stay the same?

SP: State and local education systems need to focus on supporting an accountability system that continuously improves to meet the needs of a changing society, economy, and student populations. Next generation accountability systems can serve this purpose by providing the appropriate information to the appropriate stakeholders. Further, next generation accountability can be an effective tool to inform capacity-building in schools aimed at supporting teaching and learning in a student-centered, competency-based education system.

"Demanding immediate test improvements in year one, or being intolerant to improvement wobbles in years two and three, is unreasonable. Implementing a new approach takes adult time and learning." –Beth Rabbitt

Next generation accountability focuses on designing systems that are adaptive and iterative toward continuous improvement. It focuses on distributing responsibility across the education system's stakeholders toward reciprocal accountability. Through multiple measures, accountability systems can provide data contribu-

uting to greater transparency for all stakeholders and for informing and enabling school improvement.

We are excited to see Colorado state policymakers are developing their own pilot program. Colorado's legislature passed a new law in the 2019 session to support local education agencies to try piloting new, student-centered accountability models. The Student-Centered Accountability System Pilot in Colorado provides funding and flexibility to school districts to design and implement new accountability systems. Colorado also created the Local Accountability System Grant program in 2019. This grant program will allow districts the opportunity to design accountability systems that supplement the state accountability system and align to goals of college and career readiness for all students.

BR: Yes, we can absolutely personalize learning within the current accountability paradigms, but we will be limited. New Classrooms' recent report, *The Iceberg Problem*, does dive into the accountability issues for math. While New Classrooms certainly has a vested interest in making the case for changes given recent evaluations of their product, the report is good and surfaces major issues.

JFF: I think when we're answering this question, we have to tackle two questions: first, how could we build and implement better assessments to gauge student progress, and particularly student growth, in general, at the classroom level? And second, separately, what should accountability look like? And sometimes we collapse those two questions together in ways that, I think, are counterproductive.

In the nearer term we're most excited about innovations in assessment that just gauge where a student is and his or her growth, that actually allows an educator to see where each of his students is in a way that is formative and helps continue to move them forward. Whether or not those are ready for primetime in an accountability structure is a separate question entirely.

From an accountability standpoint, a lot of hope is being pinned on the innovative assessment pilot work happening in places like New Hampshire. And that's a place where we need to probably be patient and humble and where, frankly, a lot of that work—if we really are pinning our hopes to it—needs more patient capital than what has been put into it to really get right.

“Next generation accountability focuses on designing systems that are adaptive and iterative toward continuous improvement. It focuses on distributing responsibility across the education system’s stakeholders toward reciprocal accountability.”
–Susan Patrick

CB: *That's a nice way of saying what?*

JFF: Philanthropy or government needs to be putting more money into those pilots that lasts over a longer period of time to really get those systems right. Along the same lines, these innovative pilots

will also require investments in infrastructure that will allow them to scale—I'm not sure we've seen that level of investment to date.

CB: What can policymakers and stakeholders do to distinguish between effective and ineffective personalized learning?

SP: We published a report to identify effective practices in personalized learning and also to call out “red flags,” [Quality Principles for Competency-Based Education](#), to help stakeholders understand a framework for effective personalized, competency-based education systems. The 16 quality design principles offer a set of guideposts for states, districts and schools as they redesign education systems.

While all principles are essential, districts and schools are using different entry points to begin transforming their systems and make different design choices.

No matter the entry point, the depth of implementation or the model, the quality

design principles are composed to spark discussion that will accelerate the shift toward personalized, student-centered learning. Ensuring students have high-quality learning experiences with personalized pathways requires attention to the structures, policy and operations, as well as examining the underlying beliefs with an inclusive culture of learning.

In an effective personalized, competency based education system strategies to ensure equity

are embedded in the vision and culture of the system, students are empowered daily to make important decisions about their learning experiences, assessment is meaningful and empowering, and students progress based on mastery. In contrast, a “not fully developed” personalized learning approach may offer some flexibility within one subject or class but still relies heavily on outdated structures and models of what learning “should” look like. And an ineffective model may be

“We have to tackle two questions: first, how could we build and implement better assessments to gauge student progress, and particularly student growth, in general, at the classroom level? And second, separately, what should accountability look like? And sometimes we collapse those two questions together in ways that, I think, are counterproductive.” –Julia Freeland Fisher

constrained by structural and policy barriers such as seat-time restrictions, policies on curriculum, assessments, and accountability that hinder a fully personalized system or cultural beliefs that do not value all students, ensure they reach mastery or meet them where they are.

“A lot of hope is being pinned on the innovative assessment pilot work happening in places like New Hampshire. And that’s a place where we need to probably be patient and humble and where, frankly, a lot of that work—if we really are pinning our hopes to it—needs more patient capital than what has been put into it to really get right.” –Julia Freeland Fisher

BR: Given that personalization is an instructional strategy, demand and fund the building of evidence of learning based on the aims of the program. Test scores take time to change, but any district pursuing this approach needs to have a solid evaluative logic model in place to articulate what they’re personalizing for, how they plan to do it, and a list of

leading and lagging indicators the team is using to measure implementation and progress. Effective personalized learning approaches will have a robust model, with a variety of data pointing to early stage success (typically growth data of students, as well as indicators of greater engagement and success of implementation).

We’d note that there is a growing body of formal research evidence that supports blended personalized approaches (I think we’re closer on the blended front because initiatives are older, but blended was intended to personalize, so...). As early as 2010, a study¹ by the US Department of Education concluded that blended instruction combining online and face-to-face elements in K-12 and higher education environments had a larger instructional advantage than purely face-to-face or online instruction. This finding was again replicated in a 2013² meta-analysis, which again found that “in recent applications, purely online learning has been equivalent to face-to-face instruction in effectiveness, and blended approaches have been more effective than instruction offered entirely in face-to-face mode.”

In addition, there are numerous studies looking at the efficacy of individual products, though results in these cases are mixed and vary by the nature of the technology assessed, teacher engagement, and implementation factors (e.g. implementation with greater fidelity is associated with higher outcomes³).

“Ensuring students have high-quality learning experiences with personalized pathways requires attention to the structures, policy, and operations, as well as examining the underlying beliefs with an inclusive culture of learning.” –Susan Patrick

Unfortunately, the peer-reviewed, published body of research significantly lags. But progress is being made. The most compelling support for blended/personalized learning comes from district-wide and national groups pursuing blended learning as a systematic approach to scaled transformation. Across these efforts,

leaders have developed comprehensive visions for reform, using strategies more consistently to pilot and scale. These more formative assessments of systematic change find consistently positive—though early—academic and non-academic improvements.

We’re currently doing another research scan, but to summarize, here’s our list of findings from seven system efforts across 64 districts and nine states in the table below.

Partner	Findings
Dallas Independent School District, TX	Researchers at Southern Methodist University ⁴ found that DISD's blended personalized learning pilot cohort schools have generally outperformed both the District and their feeder patterns (geographically grouped K-12 schools to which students are zoned) on the STAAR (state assessment), exceeding state index targets by a growing amount with each year of pilot. These results were of highest significance for mathematics and in reading for lower performing students. The cohort schools also outperform other district schools on key culture and school climate metrics. The district has now scaled blended personalized learning to reach over 20,000 students across the system.
Education Elements Districts, national	In a study ⁵ of 36,000 students from five EE districts with established implementations of personalized learning and NWEA Measures of Academic Progress (MAP) results, they found students in blended personalized learning classrooms achieve average growth of 130% in reading and 122% in math, compared to nationally-normed MAP growth targets.
Greeley Evans School District, CO	University of Northern Colorado ⁶ researchers found blended learning had a positive impact on the math achievement of all elementary students and a positive impact on the growth and achievement of students who are learning English. Further, blended learning had a positive effect on academic growth and achievement for all middle schools. The initiative has deep support of teachers; 79% of teachers surveyed were enthusiastic about blended learning, 73% think it significantly impacts student performance and 63% think it makes them more effective teachers.
Hybrid Learning Initiative, PA	A study by Dellicker Strategies ⁷ analyzed data from 13,500 students, 408 teachers and 58 schools to prepare a comprehensive report of 161 different "hybrid" (i.e. blended learning) programs for personalized learning in Pennsylvania. For the 4th year in a row, students in these environments outperformed students in traditional classrooms on academic achievement measures. They passed end-of-year assessments at a 20% higher rate (at all school levels, but most notably in middle school as well as in science and math) and had 98% greater academic growth. 80% of teachers also noted they believed these blended approaches were better for driving academic growth.
Leap Innovations Pilot Network, IL	LEAP Innovations' analysis ⁸ of NWEA MAP reading and math scores in the second year of implementation for its Personalized Learning Initiative network schools found students using blended learning reading products gained an average of 2.94 test-score points over the comparison group, with significant effects for Lexia usage and positive but not statistically significant effects for other products.
Raising Blended Learners Initiative, TX	Researchers at FSG ⁹ studied blended learning implementation effects on academic and non-academic student and teacher outcomes in five pilot districts in TX. They found higher achievement levels for students in blended learning classrooms on STAAR exams (state assessment). Teachers across all districts reported favorable non-academic student impacts ranging from increased student agency and ownership, to enhanced self-advocacy and self-confidence, improved behavior and attendance, and greater enthusiasm and engagement due to blended personalized learning. 100% of the teachers surveyed said that they would not go back to traditional instruction if given the opportunity.
Tennessee Department of Education	A Department of Education evaluation ¹⁰ found pilot blended learning math programs had a positive impact on assessment scores, particularly for African American students and those with disabilities. Teachers in the programs reported blended learning helped them increase differentiated instruction as well as levels of student engagement and reflection.

JFF: I think we're finally getting to a place where there are some platforms and research organizations—that's going to start tackling this sort of quality and efficacy question head on. The two I would point to, that we've been watching, are Learn, which is a platform that helps a district do two things and Jefferson Education Exchange. Models like Learn can help districts get smarter: it allows administrators to see which tools they've purchased and licensed that teachers are actually using. But secondly, platforms and efforts like these can start to do some short cycle efficacy research on what's driving student outcomes. That bring transparency to the market of tools and technology in a huge way.

Efficacy of course is more than just a matter of product evaluation—it's also a question of research methodology. The big question we would ask from a research perspective is not just how you sort the market as a discerning consumer, but how do you actually know what works, for which students, in what circumstances. A lot of traditional efficacy research was never premised on personalized learning as the archetype. It was premised on what the greatest average number of students is that you can move to proficient or above. For example, a recent U.S. Department

“Given that personalization is an instructional strategy, demand and fund the building of evidence of learning based on the aims of the program.” -Beth Rabbitt

of Education-funded RAND RCT study of Carnegie Learning's Cognitive Tutor Algebra I (CTAI) product found that CTAI boosted the average student's performance by approximately eight percentile points.

When a thorough, well-funded study like this demonstrates that a high enough proportion of students benefit from an intervention, we tend to double down on those promising signals. In turn, the fact that some portion of students or certain classes likely didn't fare as well—and others fared far better—is treated as probabilistic noise from which statistically significant signals of efficacy must be isolated. But generalizing research findings like this will not be helpful if we are trying to build systems that predictably support individual students based on their specific needs.

If you really are going to break the mold and move to this idea of individual mastery, you actually would want to be much more flexible in understanding that this student is in this circumstance, and therefore I think this tool is more likely to work for her. That's just not the kind of information we currently have on the market. Luckily, though, efforts like Learn and JEX and others are moving us in that direction.

CB: Can we scale promising policies, practices, and programs? Or does each local education system have to come up with its own unique approach?

SP: K-12 education in the United States is in the domain of state and local control. Therefore, yes, each local education system needs to have the vision and commitment to come up with an approach that is supported and works in their local context. I'm inspired by the passion of local educators transforming their schools. All the ingredients needed for long-lasting change are already present, and I'm excited to see local education systems begin to design in partnership with their communities a “ground-up” strategy.

“As early as 2010, a study by the US Department of Education concluded that blended instruction combining online and face-to-face elements in K-12 and higher education environments had a larger instructional advantage than purely face-to-face or online instruction. This finding was again replicated in a 2013 meta-analysis.” -Beth Rabbitt

However, in order to scale, promising policies, practices and programs require a strong commitment and vision that integrate multiple policies together into a coordinated system. The vision must be aligned through all levels of the system and supported in policy and practice at every level (federal, state, and local level).

Continuously improving on the goals of the education system—including redefining student success more broadly, expanding access to high-quality educational opportunities through multiple pathways, as well as emphasizing the role of teachers and students in the change,

rethinking the use of time, examining the purpose and nature of assessments, the allocation of resources, learning model designs and the role of schools within the broader context of the community—is necessary to achieve lasting change.

“A lot of traditional efficacy research was never premised on personalized learning as the archetype. It was premised on what’s the greatest average number of students you can move to proficient or above.” –Julia Freeland Fisher

BR: Absolutely. We should be thinking about personalization as a set of instructional strategies, and those strategies can be thought of modularly and pretty adaptable across contexts. Like diffusion of any innovation, we need these personalized strategies to be generalizable. However,

scaling does need to account for differences in local contexts—motivations, assets, community needs, etc.

We shouldn’t be seeking to “replicate” specific models, but instead helping education systems use personalized strategies to solve gnarly problems of instruction. We also need to set systems up to be able to shift their conditions to support the scaling of models. We’re launching a national, 10 district study in 2020 to understand how these conditions need to change and will be addressing local/state governance as part of that process.

CB: What should people be reading on personalized learning?

SP: For state policy makers, here are some resources:

- [State Funding Strategies to Support Education Innovation](#) (iNACOL 2018)
- [Promising State Policies for Personalized Learning](#) (iNACOL 2016)
- [Current to Future State: Issues and Action Steps for State Policy to Support Personalized, Competency-Based Education](#)
- [iNACOL 2019 Federal Policy Priorities](#)
- [iNACOL 2019 State Policy Priorities](#)
- [A National Landscape Scan of Personalized Learning in K-12 Education in the United States](#) (Gross, Tuchman, and Patrick, 2018)
- [What’s Possible with Personalized Learning: An Overview of Personalized Learning for Schools, Families & Communities](#) (Friend et al. 2017)
- [Rethinking State Accountability to Support Personalized, Competency-based Learning in K-12 Education](#) (iNACOL 2017)
- [Mean What You Say: Defining and Integrating Personalized, Blended and Competency Education](#) (Patrick et al. 2013)
- [The End of Average: How We Succeed in a World that Values Sameness by Todd Rose](#) (2016)

BR: Beyond the New Classroom pieces referenced above:

- [The Learning Accelerator: School model profiles](#)
- [Docterman: Insights from 200+ years of personalized learning](#)
- [Rabbitt: 5 ways to think and talk about personalized learning](#)

- [Neuhaus: Analysis: Rigorous Grade-Level Work or Personalized Learning? Research Shows Closing Student Achievement Gaps Requires Both](#)
- [Knowledgeworks: Personalized Learning State Policy Framework](#)
- [Rabbitt: 3 Critical conversations we must have around the future of personalized learning](#)
- [The Learning Accelerator: Innovative Learning Implementation Framework: A guide to shifting conditions for success and scale](#)

JFF: Readings on Personalized Learning from Clayton Christensen Institute

- [On PL as a verb, not a noun](#)
- [On distinguishing tech/blended and PL](#)
- [On R&D/research to move towards efficacy](#)

Other resources on PL:

- [National Center for Learning Disabilities](#)
- [Pathways to Personalization \(book\)](#)
- [Education Elements](#)

“In order to scale, promising policies, practices, and programs require a strong commitment and vision that integrate multiple policies together into a coordinated system. The vision must be aligned through all levels of the system and supported in policy and practice at every level—federal, state, and local.”
–Susan Patrick

Endnotes

- 1 <https://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf>
- 2 https://www.sri.com/sites/default/files/publications/effectiveness_of_online_and_blended_learning.pdf
- 3 <http://learnlaunch.org/wp-content/uploads/2018/04/Final-MassNET-Report-April-2018.pdf>
- 4 https://www.thepltoolbox.com/uploads/3/9/3/9/39393589/dallas_isd_pl_impact_report_2018.pdf
- 5 <https://cdn2.hubspot.net/hubfs/428371/Impact%20Report%202017/Education%20Elements%20Impact%20Report%202016-17.pdf>
- 6 https://www.greeleyschools.org//cms/lib/CO01001723/Centricity/Domain/47/Greeley-Evans_OneSheet_print.pdf
- 7 <http://nebula.wsimg.com/af14238897faa72aed408f76d5183b29?AccessKeyId=32B5FF3BE8169A134B6A&disposition=0&alloworigin=1>
- 8 http://www.leapinnovations.org/images/LEAP_PNC2_Report_3-15-18_red.pdf
- 9 <https://www.fsg.org/publications/raising-blended-learners-year-1-evaluation-report>
- 10 https://www.tn.gov/content/dam/tn/education/ccte/ccte_blended_learning_report_2016-17.pdf