EDITORS NOTE
While personalized learning isn’t a new topic in education, the shift to virtual instruction has presented new challenges. In this Spotlight, learn how educators tailor instruction to students’ needs, how teachers are optimizing personalized learning, and how educators are collaborating to optimize personalized instruction.

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Personalized Learning

Educators say one-on-one and small group instruction are suffering in remote, hybrid, and socially distanced learning environments.
What Is Personalized Learning?

By Benjamin Herold

Is it going to transform public schools, finally bringing education into the age of digitally driven personalization embodied by companies such as Amazon and Netflix? Or is it a billionaire-backed boondoggle, aimed primarily at replacing teachers and extracting data from children? When it comes to “personalized learning,” there’s no shortage of hyperbole from either proponents or critics.

Here’s what you need to know about the realities of one of the biggest, most controversial trends in K-12 education—starting with the most difficult question first.

What exactly is personalized learning? Inside K-12 schools, the term is used to mean just about anything.

For many educators, it’s about using adaptive software that adjusts to each student’s skill level. Sometimes, it’s about the systematic use of digital data to inform big decisions, like how to group students. Other schools focus on giving students more say over what projects they undertake, or how they present their work. And increasingly, personalized-learning proponents also take a much wider lens, saying schools must nurture each individual child’s social, emotional, and physical development.

Some see such scattered and nebulous definitions as reason to worry that personalized learning will go the way of other short-lived reforms. Others are more positive.

“In the same way that Inuits have lots of different words for ‘snow,’” says Larry Berger, the CEO of ed-tech company Amplify and a leading thinker and writer on the topic for over a decade, “I think these are all personalized learning.”

The hope is that it will improve a wide range of student outcomes, from engagement to achievement to wellbeing.

Personalized-learning pioneer Dianne Tavenner told Education Week in 2017 that it’s about the type of education good teachers have always envisioned, but haven’t always had the tools to make a reality.

“Personalized learning is a way to actually enact the pedagogy we believe in and that kids thrive in,” said Tavenner, the founder of Summit Public Schools, a California-based charter network that operates about a dozen of its own personalized-learning schools while licensing its personalized-learning software to hundreds of others.

What’s the hope behind the movement? Very broadly speaking, the idea is to customize the learning experience for each student according to his or her unique skills, abilities, preferences, background, and experiences.

Technology has already transformed other sectors of society, such as retail. Often, this has taken the form of using digital data to learn more about individuals and their preferences, then target them with information, advertisements, and recommendations. In part, personalized learning is a reflection of the push to apply those tools and ideas to education.

It’s also emerged out of rising opposition to standardized tests and the so-called “factory model of education,” which critics contend has left both children and teachers feeling like widgets inside the classroom. These broad forces started to come together in tangible form...
Personalized Learning

roughly a decade ago.
Beginning around 2009, for example, the Bill & Melinda Gates Foundation began committing hundreds of millions of dollars to support research and development around personalized learning.
Then, under President Obama, the U.S. Education Department gave half a billion dollars to encourage districts to embrace the trend, primarily via its competitive-grant program known as Race to the Top. More recently, the Chan Zuckerberg Initiative, the venture-philanthropy group started by Facebook founder Mark Zuckerberg and his wife, pediatrician Priscilla Chan, has vowed to give hundreds of millions of dollars per year in support of its vision for “whole-child personalized learning,” encompassing students’ emotional and physical development as well as their academic learning.
States, companies, other philanthropies, and a network of nonprofits and advocacy groups are also now backing the movement.

2018 Education Week Research Center survey also found that a strong majority of the nation’s principals worried that the trend was leading to too much screen time for students (85 percent expressed “some,” “a lot” or “a great deal” of concern), students working alone too often (77 percent), and the tech industry gaining too much influence over public education (67 percent.)

Do personalized learning strategies work?
Oh yeah. Big-time.
In 2018, for example, the Education Week Research Center conducted a nationally representative survey of the country’s school principals.
More than half characterized personalized learning as either a “transformational way to improve public education” or a “promising idea.”
A whopping 97 percent said their schools were using digital technologies to personalize learning in some form or fashion.

Where does all that leave schools?
Pane and his team at RAND say K-12 educators, administrators, and policymakers are in the unenviable position of having to make high-stakes educational decisions with “imperfect evidence.”
That doesn’t mean they should stick their heads in the sand, the RAND team said. Personalized learning holds promise. Careful, cautious attempts at some elements of the trend may make sense. Stick to common sense and the evidence we do have, they advise. Resist pressure to throw out established practices that work just because they’re not new and shiny.

But think twice before diving in.
“…I would not advise schools to dump massive resources into going fully into personalized learning…” Laura S. Hamilton, a senior behavioral scientist and distinguished chair in learning and assessment at the RAND Corporation, told Education Week in 2017. “Experiment with some new approaches that might be a good fit for your particular school or district, but monitor it very closely.”

...Illustrations: Getty
Nothing governs the school day quite as strictly as time.

This is especially true in middle and high schools, where subject-specific blocks break up the day, and bells control when they stop and start. Often, these schedules are created at the district level, informed by state requirements that tie school funding to seat time.

These structures help organize and manage instructional time for the hundreds—or thousands—of students in a building. But they can also be major headaches for educators who are trying to give each student more control over when and how fast they learn—essentially personalizing the pace of their education.

Personalized learning emphasizes that students have some control over what, how, where, and when they learn. Addressing all four of those variables can require some big instructional changes. But there are especially intractable issues around when and how quickly students should learn.

“You do start running up against policy barriers and structures that assume that schedules are still stuck on a factory model,” said Susan Patrick, the president and CEO of iNACOL, an online-learning research and advocacy organization.

And even if schools can get around these barriers, they face new challenges—such as how to find time-management software that’s equipped to manage more flexible school scheduling strategies.

“I still think we’ve barely scratched the surface on how to use time effectively in schools,” said Buddy Berry, the superintendent of the Eminence Independent Schools in Kentucky.

His district moved to a competency-based-learning framework almost a decade ago. The school system developed a graduate profile that linked back to individual standards in grades K-12.

But figuring out how to maximize learning time and pacing for each student? “I think it’s probably the next great quest for education,” he said. “I don’t think we’re there yet.”

In Berry’s district, personalized learning is
tied to these standards that link to the graduate profile. Students have to demonstrate that they meet those standards, through tests, portfolios, or project-based work, in order to advance.

In theory, that means when students meet those benchmarks, they can move on. In practice, it’s more complicated, Berry said.

**Traditional Schedule, Innovative Teaching**

When the nearly 900-student district first started using a competency-based model, it tried to shake up schedules. At Eminence High School, Mondays, Wednesdays, and Fridays were reserved for core instruction. Tuesdays and Thursdays were more flexible, open for enrichment, acceleration, and project-based learning.

But the system wasn’t sustainable. Many of the students at the high school took career-tech-ed courses offsite or were spending some part of the day in early college. Eminence’s non-standard schedule made it difficult for students to slot in these off-campus opportunities.

Now, the enrichment time still exists, said Berry, but as a period within a traditional school day.

For the most part, all students are moving at about the same pace. For example, most 11th graders take chemistry at the same time, every year. But some teachers at the district are finding creative ways to let students move at a non-traditional pace, within a traditional schedule.

Take that 11th grade chemistry class. Michael Quist, a chemistry teacher at the district’s only high school, knew early on in his career that he didn’t want to spend every class lecturing, delivering the same content to all his students at the same time. “I was so over that after my first year of teaching,” he said.

He knew that all his students had to master the same content and skills. But he wanted to let students move through material at different speeds and learn it in the way that made most sense to them—whether be research reports, projects, labs, or some other approach.

So Quist broke down his units into two main parts.

The first he dubbed “foundation”—the core ideas that students need to understand before moving on. In every unit, there’s a reading and writing assignment, a math piece, and partner work—skills that are essential for students to develop in science class, said Quist. Still, students can tackle these assignments in different orders and at their own pace.

Once they can demonstrate that they know the foundation skills, through a written or oral test, students can move on to “exploration.”

That’s when they have the opportunity to do enrichment projects, like conducting lab experiments, building molecular models, or writing research papers. Taking on more of those activities can lead to a higher letter grade at the end of the course.

On any given day, Quist said, there will be four or five different activities going on in the classroom, with some students in foundation and some in exploration.

Still, equipping students with the time-management and reflection skills to self-pace can be challenging. He sometimes needs to intervene when a student is far off-schedule. Within each three-week unit, Quist expects most students to be done with foundation by the end of week one. “By the end of week two, I’ve already stepped in if they’re struggling,” he said.

One student, for instance, couldn’t focus on getting a reading and writing assignment done. It was the only step he needed to move on to exploration. Quist assigned him to finish it on a specific day, at a specific time. “I had to be very, very particular with him on getting that done,” Quist said.

Overall, though, most students learn self-regulation skills through the process—skills that are just as important as the science content, Quist emphasized. He focuses a lot on procedure and expectations during the first few units, so that the framework is second nature to students later on in the year.

**Tough Questions, Technological Responses**

In Quist’s class, students sometimes use Excel to analyze data or simulation software to explore chemical systems. But technology isn’t ever-present, Quist said, and it isn’t necessary for the work he’s doing around pacing. Instead, he tracks each student’s progress on a paper cover sheet that he gives them for the unit.

But what happens when teachers are experimenting with pace across classes—and across subjects? How do you manage the schedules of hundreds of students, when each one is slightly different?

Those are the questions that educators at Pioneer Ridge Middle School in Chaska, Minn., were wrestling with when they decided to dismantle part of their block schedule.

The decision was made in service of a larger goal at Pioneer Ridge: Make school more learner-centered. The school’s principal, Dana Miller, had tapped three teachers to come up with a new instructional model: Carly Bailey, now a personalized-learning coach; Dan Thompson, an intervention specialist; and Jennifer Larson, a language arts teacher.

After researching different student-centered models and visiting other schools to see them in action, the teachers decided they had to remove scheduling constraints that divided up subjects and kept each student in the same space for the same amount of time. They wanted to differentiate for student ability, while allowing for more interdisciplinary connections.

So they decided that for most of the school day, they would blow up the bell schedule. The three teachers offered a variety of options: whole-group instruction, small-group work, one-on-one coaching, seminar-style discussion.

“Kids would say, ‘I need this tomorrow, I’m ready for this,’” said Bailey. Teachers could also assign students to specific activities, based on their assessment of students’ needs.

**Thinking Big, Starting Small**

The 500-student school started small, with a group of 60 students in 2012. Even so, keeping track of all the moving parts was challenging.

At first, teachers used a giant whiteboard
covered in hundreds of magnets that represented individual students’ time. But the magnets would fall off, or get lost, or students would switch them around when they weren’t supposed to. They also tried Google Docs and Microsoft Access, but neither of those applications could do what they wanted: a flexible system that would allow for a lot of activity offerings with different participant caps, where some could be assigned by administrative users (teachers) and others could be selected by regular users (students).

Because they couldn’t find the perfect system, the school decided to create one. Working with a developer in the Eastern Carver County district, Pioneer Ridge created software called Flex Scheduler. Since then, the school has expanded the program to other grades.

“It was critical for us to have that collaboration with somebody who knew how to build and how to code, so that we could talk about the philosophy of things, and the pedagogy behind it, and make that technology work for education,” said Thompson.

The technology makes varied pacing possible, but it doesn’t drive instruction—it’s a scheduler and a tool to analyze students’ progress. That’s an important distinction, said Miller, the principal.

“There’s this myth or this confusion out there that [personalizing pacing] means all these kids are sitting in their room on their devices, and they’re going at their own pace, and the teacher is a check-in spot,” she said. “That’s not the case at all.”

But it takes more than a well-run scheduling system to personalize pace effectively. Teacher buy-in is essential, said Miller, and it’s something Pioneer Ridge is still working on.

Much like teachers at other schools around the country, a good number of Miller’s teachers prefer lecturing, or mostly direct instruction. “The biggest struggle has been helping teachers to move beyond, ‘I have to be the person in charge [in the classroom],’” she said. “That’s not the case at all.”

By Madeline Will

“[If there is a silver lining to the heavy emphasis on remote and hybrid instruction during the pandemic, it is this: Students are getting more opportunities to work independently and at their own pace—and in the process, they are becoming better problem-solvers.”

At least that is the take of educators working in schools where personalized learning is the centerpiece of instruction. They say the shift to remote and hybrid instruction has given them an opportunity to deepen their commitment to learner-centered approaches and build new strategies that will continue to be applied once all students are able to return to school buildings at full capacity.

“[When we had to shift to remote, that mindset was already there—the mindset of pulling small groups, developing independent learners, making kids own their own learning,]” said Katie Speth, the principal of Disney II Magnet School, a personalized learning pre-K-12 school in Chicago that is remaining fully remote for the fall semester. “In terms of logistics, remote learning is incredibly difficult—people don’t realize how much more time it takes teachers. You don’t have that instant feedback, you don’t have the ability to scan the room, but I think the mindsets were [already] there: ‘I know how to set the stage to help students.’”

Schools in personalized learning networks such as High Tech High, LEAP Innovations, Rocketship, and Summit Learning have had to make teaching and learning adjustments...
whether they are fully remote this semester or having students come to campus some or five days a week. These changes, educators say, have helped them become even more focused on the primary goals of personalized learning: tailoring education to address the individual strengths and weaknesses and personal interests of students.

One cautionary note, however, is that the research on the effectiveness of personalized learning was limited, at best, before the pandemic, and some personalized learning initiatives have prompted pushback and criticism from parents and students, who say the programs put too much emphasis on the use of technology and software algorithms to drive learning.

Here are some of the lessons learned so far.

1. Educators have no choice but to be flexible these days, and that's a good thing.

Personalized learning has always required some degree of flexibility, but teachers say they must be even more nimble now. In schools that are still remote, teachers have to account for students’ individual situations and limitations at home. And in schools that have resumed in-person instruction, educators have to be ready to switch the mode of instruction on a dime as positive or presumed positive cases of COVID-19 occur.

“We’re realizing that we don’t have as much control over what the final product or task is going to look like,” said Heather Morrison, the instructional coach for Disney II’s high school campus. “It’s really pushing us to think of what are the different ways we could have students demonstrate what they know.”

For example, she said, teachers previously would assign a different type of final project to each unit—a writing assignment, video, etc. But now, depending on what it is they’re assessing, teachers are allowing students to choose which final project works best for them.

Said Speth: “I have really flexible teachers, but [remote learning] is even increasing that flexibility. Teaching is a profession where we like to control things, and there’s been a lot of letting go of control, [which is building] stronger, more-independent students.”

Prairie Heights Middle School in Evans, Colo., meanwhile, has resumed in-person instruction all five days a week. But Principal Stephanie Knox said teachers there have continued to use online tools so learning isn’t disrupted if students have to quarantine for two weeks due to a positive or presumptive positive COVID-19 case. The school already used the Summit Learning platform, but Knox said teachers are being even more creative with technology now than they used to be. (Summit Learning receives significant financial support from the Chan Zuckerberg Initiative, which also provides support to Education Week for its coverage of whole-child approaches to learning. Education Week retains sole editorial control over the content of this coverage.)

“Some of the tools [students have] been learning, like annotating text on Zoom—you would have never, never seen that in a classroom prior to the pandemic,” she said. “We’re developing different skills in students.”

2. Targeted support and explicit instructions are key.

Morrison said Disney II teachers have started recording themselves modeling tasks or delivering short lessons and posting those videos onto the school’s learning platform.

That’s a practice that teachers will likely keep when students return to campus, she said. Not only does it let students review instructions whenever they need to, but it’ll help them work more independently without relying on teachers to answer basic questions.

At Kairos Academies in St. Louis, students were already used to working online and at their own pace through the Summit Learning platform, but they had to adjust to doing the work without a teacher nearby. This semester, half of students are remaining completely remote while the other half are coming to campus two days a week.

The personalized learning public charter school, which serves 6th and 7th graders, has had to redesign its schedule to provide more support to students. Kairos introduced self-direction days at the start of the semester, where students were able to work independently from home.

“What we found was there was just no accountability there, and kids were just missing interactions [with their teachers and peers],” said Riley Foster, a 6th grade math teacher at Kairos. Now, teachers have increased the amount of time they spend with their students on self-direction days, including two facilitated virtual classes, a virtual group lunch with friends, and supervised work time for students who need extra support.

3. Students may need extra guidance managing schedules and completing assignments.

Kairos Academies also increased the level of support students had from their coaches. Since the school was founded two years ago, teachers have had a group of 10 students for whom they provide one-on-one support for executive functioning tasks, such as completing assignments on time and maintaining productive study habits.

Students used to meet with their coach
4. Project-based learning is still possible when done virtually.

Project-based learning is a key tenet of personalized learning, but educators say the switch to remote, hybrid, or socially distanced instruction made it difficult to do the same kind of robust projects that students previously did in person, with no social distancing limitations.

Still, the transition sparked new learning possibilities, said Brenda Vogds, the director of the Institute for Personalized Learning, which serves school districts that are engaging in personalized learning. She has seen educators more frequently encourage students to connect with experts over video chat.

“You’re not limited to the resources in your school walls,” she said. “You now have the opportunity to reach out into the community to make connections you may not have been able to make before.”

And some schools brought projects to their students’ homes. Eesir Kaur, the senior director of humanities and professional development for the Rocketship Public Schools network, which is still providing mainly remote instruction this semester, said campuses hosted a distribution day where families picked up materials for hands-on projects. For example, students picked up markers, paint, and poster boards to create a “get out the vote” campaign for a civic engagement lesson. For an engineering lesson, students picked up popsicle sticks to build a catapult.

5. Students still need opportunities to speak up and collaborate.

Educators also have to find creative ways to foster collaboration and student talk time in this unprecedented school year. Knox, the principal of the Colorado school that has opened for full in-person instruction, said students can’t have their desks side by side or work closely with one another, in order to maintain social distancing. They might still join a Zoom meeting from the classroom or use other virtual tools to work together without being nearby.

“It just takes a couple extra steps,” Knox said. “An easy way out would be to say, ‘Nope, everyone’s going to sit there and do the same thing at the same time.’ That’s not what we believe in.”

With remote instruction, Kaur said, one initial challenge was making sure young students had enough opportunities to talk in class. Typically, they’d do “turn and talks,” a classroom practice in which the teacher poses a question or discussion topic and students turn to a peer and discuss. But breakout rooms on Zoom were cumbersome for kindergartners.

Instead, one kindergarten teacher told students to bring their favorite stuffed animal to virtual class. That stuffed animal, the teacher said, would be their study buddy. Students would be responsible for sharing their thinking with their study buddy or telling it the sound they were learning.

In other words, the stuffed animal served as a “turn and talk,” Kaur said. The concept was so successful that Rocketship has replicated this practice across the entire network for grades K-2.

“You see little Lilos and Stitches everywhere, or parrots or teddy bears,” she said. “It’s really awesome.”

6. Remember that the challenges are helping build more independent learners.

While there have been some roadblocks, educators say they’ve seen students grow as problem-solvers and learners.

“When we transitioned to distance learning, it emphasized the idea that you move at your own pace because you are only trying to compete against yourself, you’re only trying to be a better version of yourself,” Rocketship’s Kaur said.

Krista Purnell, a school and district success manager for Summit Learning, added: “Once the pandemic’s over, there may be something else that comes along in the world, but having those habits of resilience, self-regulation, agency … we’re helping schools build that now.”

In fact, Vogds of the Institute for Personalized Learning said this transition has forced schools to take a hard look at their instruction and make sure they’re centering it on students and their individual needs.

“Education’s future is not direct instruction, education’s future is learner-centered practice,” she said. “If we miss this opportunity, I’ll be very disappointed.”

Saras Chung watches her son Jaron participate in an online class.
Remote High-Performance Learning

Enabling High-Performance Computing in K-12 and Higher Education

School districts and universities across the country are navigating many challenges as they continue to shift toward virtual instruction in online learning environments. While some are prioritizing the basics out of necessity — making sure students have a working device and internet access — others are beginning to turn their attention to users with high-performance computing needs.

Distance learning has cut many students, faculty, and researchers off from access to powerful school-based workstations. Prior to school closures, these workstations were used to run high-end and specialized software applications. Given that most at-home devices provide insufficient computing power to accomplish heavy computational workloads, research and learning have slowed or ceased completely. This has negative implications for critical learning opportunities and the ability to conduct research, but will also result in a long-term impact to current students’ skill development and future job prospects.

Areas of study that require high-performance computing power are in line with the growing need for professionals in the fields of science, technology, engineering, and mathematics (STEM). This trend is reflected in the U.S. Department of Education’s $540 million investment in STEM via discretionary and research grants. To mitigate the effects of STEM learning gaps, school district and university IT departments must be swift to identify cost-effective solutions for remote high-performance computing.

Remote learning gaps

Students at all academic levels are subject to learning gaps as a result of unexpected school closures. While the challenges school districts and universities face may differ, the urgent
need for more robust online learning capabilities applies across the board. This comes with additional considerations for students engaged in STEM learning at K-12 and higher education institutions.

**Disruptions to K-12 STEM education**

When compared to higher education, K-12 districts began scaling their remote learning efforts from a disadvantaged starting point. Many colleges and universities have some existing form of remote infrastructure in place, as online classes have been a regular part of higher education for years. For K-12, however, remote learning presents a more complicated set of challenges to overcome.

Given the absence of basic remote infrastructure, school districts have been scrambling to implement distance learning for student populations with highly diverse needs. The dynamic nature of this fast-changing situation also means that many K-12 IT professionals are having to adapt their strategies in real time. This survival-mode approach means STEM learning that requires computing capabilities unavailable to students on personal devices is not a priority. But it should be.

Programs like career and technical education (CTE), which used to offer an alternative to college by preparing high school students for skills-based careers, have evolved into rigorous academic programs that now prepare them to study college-level technical subject matter. This includes focus areas like architecture and engineering, design and animation, and information technology.

**Millions of K-12 students enroll in these programs** every year. By failing to connect them to compute cycles that are critical to research and learning, students are missing out on important training opportunities that will prepare them for life in college and beyond.

**Disruptions to college STEM education**

As mentioned, most colleges and universities have existing remote learning infrastructure to build upon. While it’s unlikely that many were prepared to rapidly scale their online learning environments, the widespread availability of online classes gives university IT departments a leg up in confronting remote learning challenges. The fact that college students are more
likely to be tech savvy and to possess a personal device makes it easier to focus on more complex distance learning initiatives.

Similar to K-12 students engaged in CTE programs, college students that cannot connect to high-power workstations on campus are being denied critical learning opportunities that are vital to preparing them for the workforce. This is particularly problematic for students engaged in research and education relating to data science, engineering, design, and medical applications. It has also been hugely disruptive to ongoing research—much of which has been postponed or abandoned altogether. Some students who were set to graduate this year will even have to stay in school another year, incurring more student debt and further delaying their entry into the job market.

Remote HPC support for students
To address STEM learning gaps and their potential long-term effects, school districts and universities should invest in resources that will enable students to perform complex computing tasks from remote locations using personal devices. HP's ZCentral Remote Boost is a pro-grade solution that harnesses the power of school-based workstations to enable high-performance computing on almost any device from anywhere.

ZCentral solutions offer a low-bandwidth way to satisfy high-power learning needs. This means students, faculty, and researchers can access applications, content, and high-performance computers on campus from a remote location—even with low-end devices and mediocre internet speeds. Simple, fast, and secure, ZCentral offers a cost-effective solution to triaging disruptions to STEM education at all levels.

Keep STEM learning in motion with a 90-day free trial of HP ZCentral Remote Boost, available for download at hp.com/ZCentralRemoteBoost.

For a more in-depth look at ZCentral, check out this informational video.
How Personalized Learning Is Weathering Tough Times: ‘Iterate and Learn’

By Kevin Bushweller

Making personalized learning work is hard under normal circumstances. Teachers must pay close attention to each student’s academic strengths and weaknesses and their personal interests. Students must have regular access to digital devices and WiFi, but not overuse technology. And schools must balance maintaining academic rigor with encouraging students to pursue projects fueled by their interests.

Trying to do all that during a pandemic makes those challenges even more daunting. That is especially the case for schools serving students in high-poverty communities of color where the threat and impact of the coronavirus is much higher, and they are likely engaged in remote or hybrid learning.

Even so, many schools in those circumstances are muddling through the challenges—and some principals and their teachers are innovating and learning important lessons on the fly that they believe will make their schools better for the long haul.

One of those educators is Stacy Stewart, the principal of Belmont-Cragin Elementary School on the northwest side of Chicago. The community surrounding the 430-student school has one of highest positivity rates for COVID-19 in the city, 94 percent of its students are Latinx, 4 percent are Black, and 84 percent are from families living in poverty. Instruction is currently all remote for the K-8 school’s students.

Phyllis Lockett, the CEO of Chicago-based nonprofit LEAP Innovations, has been working with schools like Belmont-Cragin on developing personalized learning programs before and during the pandemic, evaluating their effectiveness, and helping them make instructional adjustments now and for the future.

In separate Zoom interviews with Assistant Managing Editor Kevin Bushweller, Lockett and Stewart recently reflected on the lessons they have learned trying to make personalized learning work under difficult circumstances.

What do you see as the biggest challenge during the pandemic?

Lockett: There are many struggles. First and foremost is technology access. We still have not cracked the nut on how we ensure broadband and device access for all students. I think one of the silver linings that will come out of the COVID crisis is a movement to make technology access a student right for all learners across America. It is as basic as water and air if we are serious about preparing our students to be competitive in a digital economy.

Stewart: We don’t want kids having a lot of screen time. [But] we have to follow the district or the state’s mandates in terms of synchronous and asynchronous instructional minutes. What we are trying to do now more intentionally based on the feedback of the students is give them more asynchronous time to work on projects. We thought, if this is something they are passionate about and it is still aligned to standards, then why do we have to have them in front of the camera to do a project when they could just do the project and use the camera for the presentation or to ask questions or to collaborate with a group of other peers who may be doing something similar?

How long have you been using personalized learning approaches in your school?

Stewart: Five to six years. But I feel like this year we are all brand new to doing it this way, and it’s another level of vulnerability. We were doing very well with it, but now the environment has changed, the control and flow of the day has changed.

Did you see student gains prior to the pandemic?

Stewart: We went from being one of the lower-ranked schools in the district to one of the top-tier schools in the district within three to five years. As we delved into personalized learning, we saw huge increases in student growth where you have 95 percent or more of our students meeting or exceeding
growth standards in reading and math.

**How do you create a balance between personalized learning approaches and performance on standardized tests?**

**Lockett:** Personalization, in our opinion, does not trade off [academic rigor]. You have to set a high bar of expectations and academic outcomes for students. How do you do that in a way that honors every student’s context? We feel very strongly that state testing needs to absolutely continue to be a criteria for success. But it can’t be the only criteria on which we measure our students and assess their skills and needs.

**Why do you think some self-directed learning efforts lack academic rigor while others are very effective?**

**Lockett:** [For a long time], there was no connection between learning science and how kids learn. You’ll see this manifested in how kids are using or engaging in ed tech [during the pandemic]. What’s really fascinating to me is when I hear a lot of folks talking about how remote learning doesn’t work because of the tech and the kids don’t want to be on the tech all day and all these things. Yeah, it’s like, guess what, kids don’t want to be on Zoom all day listening to a teacher tell them what to do. It’s even worse in a virtual environment, let alone a school [building].

**What level of professional development does it take to get teachers ready to use personalized learning strategies?**

**Stewart:** Let’s talk about the “why” [first], because universities are not training pre-service teachers for this type of work. And so what happens as a building leader is you are having to undo a lot of the traditional practices that were emphasized by the universities. So that’s one big challenge.

And the opportunities?

**Stewart:** We use our school as a lab site for personalized learning. You can take a small subset of teachers who you call your “first followers” of this type of learning and those are the ones who get the largest amount of professional development to pilot the work and use the lab model to be studied by the rest of the school.

**What do you think is the next big step for personalized learning?**

**Lockett:** We really need to upskill and reskill our educator workforce. Educators not [using] an LMS [Learning Management System]—that’s nonnegotiable, especially in the context that we are preparing students for a digital economy.

Cultural competency. Another big, big deal. That connects not only to relational skills, but understanding the context of our students, particularly our Black and brown students. If a teacher does not understand how to connect and value the culture and context of the students they are serving, there is no way they are going to be able to build the relationship and trust.

**Stewart:** We have to continue to listen to kids more and be flexible with what they tell us. It’s hard. I don’t want to keep having to iterate, but you do. And that’s the one takeaway I can always recommend: not to be afraid to iterate and learn.

Also we need to look at this issue of equity. How can we eliminate some of those barriers across the country? How do we provide more equitable access and resources and experiences regardless of where students live or their socioeconomic status?

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**Why Personalized Learning Is Struggling During COVID-19**

By Alyson Klein

Personalizing learning to kids’ unique academic needs and personal interests is a tough nut to crack, and that is especially the case within the confines of a Zoom square. That is one of the big takeaways from a recent national survey by the EdWeek Research Center.

Personalized learning, accelerated by advances in technology and new teaching approaches, has been gaining steam—and attracting criticism—for years. Just a year ago, nearly three-quarters of teachers had a favorable or neutral take on the strategy, according to EdWeek Research Center data, while critics continued to hammer the approach for overusing technology.

Then came COVID-19.

Schools are now grappling with a chaotic season of figuring out how to do remote, hy-
brid, and socially distanced instruction; planning for looming budget cuts; struggling to work through sputtering home internet connections or no connections at all; and addressing the growing social and emotional needs of students.

Bottom line: Making sure lessons are tailored to individual students’ needs might be getting pushed to the back burner, out of necessity.

More than half of educators said teachers aren’t doing as well personalizing instruction as they were before the pandemic. And most say group work and individual instruction—hallmarks of personalized learning—aren’t being used as intensely as they were prior to last March. But two-thirds of educators do give their districts and schools positive reviews for professional development they have received around personalizing instruction during the pandemic.

Educators report doing the best they can, under very difficult circumstances.

“We know that one of the most effective means for being a quality educator is that we can build relationships with students,” said Jeff Wright, the superintendent of Michigan’s Pewamo-Westphalia district, which is using a hybrid model of instruction and prides itself on close connections between educators and students. “Students need us far more right now than probably any time in our history. To do that relationship piece with a mask, while quarantining and social distancing, is not what we want.”

Here are four key observations based on the results of the nationally representative EdWeek Research Center survey—which included 370 teachers, 169 principals, and 251 school district leaders—and follow-up interviews with educators:

1. Educators Feel Less Effective

More than half of educators—53 percent—said that they feel teachers are much less effective, or at least somewhat less effective, when it comes to gauging students’ individual strengths and weaknesses, and personal interests, than they were before COVID-19 disrupted schools.

“Teachers are doing the best they can,” said Courtney Castelli, the assistant superintendent of Columbia Community Unit School district #4, near St. Louis, which is using a hybrid model of instruction. Elementary students come in for half days, and older students come in two days a week, with three remote.

But Castelli added that “it obviously is more difficult when you don’t have a consistent in-person relationship.” With in-person instruction, “you get a read for the room and you get a pulse of what’s going on in the classroom. When you’re not seeing them consistently, that becomes really difficult.”

Classroom teachers agreed.

“Body language is about 85 percent of the communication [with junior high school kids],” said Boyd Snyder, who teaches social studies to 7th and 9th graders in central Minnesota’s Royalton school district, where students are attending school in person. “You can’t get that talking to a screen.”

It’s even a challenge for schools that are doing in-person instruction, because students are expected to socially distance and wear masks.

“I’d say we’re probably doing about 70 percent” of the personalized instruction that happened pre-pandemic, said Mike Kish, the principal of Immaculate Conception School, a private Catholic school in Columbia, Ill., which is doing in-person instruction. Teachers used to go around the room and work directly with students, but now many are “stuck to their technology like an umbilical cord in the front of the room” to comply with social distancing.

“Students need us far more right now than probably any time in our history. To do that relationship piece with a mask, while quarantining and social distancing, is not what we want.”

JEFF WRIGHT
SUPERINTENDENT, MICHIGAN’S PEWAMO-WESTPHALIA DISTRICT
Plus, it’s harder to get to know students when they have half their faces covered. “I picked up 60 new kids this year and when you’re just looking at the mask it’s hard not to get their names wrong,” Kish said.

Teachers are doing their best to find ways around the problem.

For instance, in Castelli’s district, teachers have been more apt to ask students to show their work so that they can see who is struggling or excelling. In classrooms, teachers used to do a lot of informal formative assessments, such as asking kids to hold up a number between 1 and 5 to demonstrate how well they mastered a particular concept.

Now these check-ins are a bit more formal. “Before they might not have required a written response, now they are going to ask for a written response so that they have something concrete to assess,” Castelli said.

2. One-on-One, Group Instruction Drops

Breaking kids up into small groups—a hallmark of project-based learning and class discussions in personalized learning environments—just isn’t as easy on Zoom or Google Meets, especially for the youngest learners.

The majority of survey respondents—60 percent—said there has been “somewhat less” or a lot less individual and group instruction during the pandemic. Only 22 percent said there has been “somewhat more” or a “lot more.”

Natalie Waldrop, who teaches 4th grade at Whitnel Elementary School in the small, rural town of Lenoir, N.C., said many of her students don’t turn in their work, which makes it tough to figure out what their learning needs are.

“No small group instruction is happening because I don’t know who is where,” she said. And she’s worried students might cheat on assessments or get too much help from their parents. “I’m not going to trust a test that they take at home because they didn’t take it with me.”

One-on-one instruction is not much easier. For instance, Snyder said he can only have one student at a time share a screen with him. “I’ve got classes that are over 30 kids,” he said. “What do the other 29 do?”

Even districts that have stuck with in-person learning have struggled.

The Pewamo-Westphalia district is doing face-to-face classes, full-time for nearly all its 615 students. But desks are spaced out as far as possible. Kids are required to wear masks. And students are encouraged to maintain as much separation as they can from their peers.

That makes group work a challenge, Wright said. His teachers, he said, used to see themselves as facilitators, allowing students to learn as much as possible from one another. These days, though, many are relying on direct instruction because of social distancing requirements.

“We’ve gone away from tables that are good for group work,” Wright said. “It’s hard for me to recall the last time [before the pandemic] we moved desks into a classroom. Usually, you’re moving tables in and desks out.”

But teachers are finding ways to make it work.

Karen Doyle, a school librarian at Komarek 94 school district near Chicago, also teaches a science, technology, engineering, and math class in which she asks students to work in groups to manufacture the strongest possible glue.

This year, with classes operating remotely, the kids couldn’t get messy with the ingredients. Instead, Doyle put her students into three virtual groups. Each had to vote on the recipe they thought would work best. Then Doyle filmed herself making the glue using each groups’ instructions and testing to see which was the strongest.

“It worked,” she said. “It wasn’t ideal. They didn’t get their hands dirty.” But it gave her confidence that group work can happen, “it’s just harder, especially with the stuff that’s hands-on.”

People automatically think that if it’s remote, it must be all tech. And I think tech is a big component, but it’s not the only component. We still want kids reading books. We still want kids manipulating manipulatives. We still want children writing and editing and revising.”

LOIS COSTA
SUPERINTENDENT OF THE HAMPTON SCHOOLS, NEW HAMPSHIRE
3. Tech Use Is Bigger Than Ever

Educational software and digital collaboration tools have taken on an outsized importance during COVID-19. More than half of educators—54 percent—reported teachers were using software “a lot more” for instruction, and another 32 percent said they were using it “somewhat more.” Just 2 percent of educators said they were using it for teaching “a lot less” or “somewhat less.”

Software usage has skyrocketed in New York’s Hornell City school district, near Rochester, which is using a hybrid approach to instruction.

“Zoom is used way more than ever. Google Classroom is used way more than it ever was,” said Jeremy Palotti, the superintendent. He named other apps that are getting more play, including Class Dojo, a classroom management program. “None of these are brand new to us. We just didn’t use them as consistently across grade levels as we are now.”

Doyle, who helps her colleagues with technology, said she’s had a lot of requests lately. “I definitely know that teachers are looking for things,” she said. Teachers are more likely to use apps such as BrainPOP, a website with instructional videos, and Nearpod, which offers interactive videos and formative assessments.

“I think it’s a really good thing that teachers are being exposed to these kinds of apps,” Doyle said.

But educators also know that technology can’t be the only way that students are learning, even if their classes are partly or mostly remote, said Lois Costa, the superintendent of the Hampton schools, a 1,000-student K-8 district on the coast of New Hampshire. The district has been operating in a hybrid mode this school year, with two different cohorts of students coming in two days a week and the rest of instruction online.

“People automatically think that if it’s remote, it must be all tech,” she said. “And I think tech is a big component, but it’s not the only component. We still want kids reading books. We still want kids manipulating manipulatives. We still want children writing and editing and revising.”

Costa wants her teachers to “be mindful of the other choices that we want to give our students in addition to technology.”

4. Most Say PD Is Effective

More than two-thirds of educators surveyed said that the professional development to help personalize learning for kids in a remote or hybrid setting has been “very effective” or at least “somewhat effective” in their schools or districts. A little more than a quarter said it has been “somewhat” or “very” ineffective.

“We’re being extremely thoughtful both in terms of acting on feedback and trying to give teachers what they need when they need it,” Palotti said. “The PD has been very pointed and very flexible and very targeted to our current needs.”

But he added that he won’t really know how effective the district’s efforts were until June. “The success in terms of a tangible result [for]
student learning and performance remains to be seen.”

Doyle was part of a team of educators that spent the summer trying to design professional development for colleagues. And she said that while they did “a good job with what we had,” it wasn’t sufficient.

“It did not help as much as we hoped it would,” Doyle said. “I think the time allocated for professional development just isn’t enough for technology because everybody is having to jump in with both feet. And some people’s comfort levels just aren’t there.”

Only 6 percent of the educators surveyed said their schools or districts didn’t have any professional development in this area. For instance, Waldrop said her district has offered virtually no assistance on personalizing learning for kids in a virtual environment.

And the same goes for Snyder’s school in Minnesota. “Oh gosh, no!” he said, when asked if he’d gotten help in personalizing instruction for students in a remote context. “I think everybody is learning as they go.”

### OPINION

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### 3 Fundamentals of Teacher Collaboration in Personalized Learning

How a strong start, clear boundaries, and deliberate reflection are key in creating a culture of collaboration

By Molly Farrell

While the concept of teacher collaboration is not new in K-12 schools, the value of shared practice is often amplified for teams implementing personalized-learning models. In many of these models, teachers work more collaboratively and often get new information about students daily. Because of this, teachers need to connect with each other and familiarize themselves with relevant student information so that they can support all students the same way. This could be anything from knowing student skill levels to implementing specific intervention strategies.

Through New Classrooms’ work partnering with schools using Teach to One: Math (TTO), we have identified three key ways that strong teacher collaboration can be instilled into a personalized-learning environment.

### Setting Norms

Shifting to a collaborative teaching model is a lot like going from neighbors to roommates. What you do in your own classroom—whether it’s grading, discipline, or taking attendance—will have to adjust. So at the beginning of each year, it is important for all teachers to align expectations on a variety of classroom components, from academic to operations. This allows teachers to establish logistics, assign specific roles, agree on a behavior consequence structure, and norm on grading weights. In learning models such as TTO, a student will develop relationships with each teacher, making this norm-setting process important in order to start the school year strong.

After these norms are established, teachers should commit to continuous collaboration, a process we call “Common Planning.” These recurring meetings should take place at least a few times per week to ensure teachers are able to regularly analyze data and develop appropriate interventions. Common planning involves a discussion of expectations for a given lesson, including how student work and engagement will be evaluated. This time creates a space for teachers to share best practices, suggest useful manipulatives, and flag common student misconceptions they have seen. These meetings allow teachers to feel more prepared and better equipped for their daily lessons.

The math team at William P. Gray Elementary School in Chicago is a great example of this in practice. Gray’s team has a range of backgrounds and big differences in years of experience. On paper, one would think that their daily common planning might end in a draw on all topics. But if there’s one quality that makes the math team at Gray successful in their implementation of TTO, it’s their collaboration. They approach every discussion with an open mind and their students’ interests at heart. Hearing them talk is inspiring. They are courteous, good-humored, and,
there’s Value in Infusing the Arts Into Personalized

By Jin-Soo Huh

“Arts are a part of who our students are, who people are,” said Kara May, the director of Art in Motion (AIM), a school on Chicago’s South Side this fall. The arts encourage creative expression and cognitive complexity, they communicate ideas that impact both hearts and minds, they connect people within and across cultures and history, they give our lives meaning. Given the strong benefits of arts integration, my colleagues and I at Distinctive Schools asked ourselves this question: What would it look like to make the arts a core part of personalized learning? Through our work, we were able to discover a natural, strong connection between personalized learning and arts integration.

“It's important that arts aren't just desserts,” May emphasized. “So many schools offer the arts as a supplemental piece. Having a dually focused approach at Art in Motion, where there are both arts classes and content classes infused with the arts, makes the students’ learning so much more sound, pedagogically.”

An interdisciplinary approach to infuse the arts across the curriculum would help students develop a broad range of competencies in a more authentic way. When we separate “core” subjects from other subjects in schools, we are often faced with false choices. Traditionally, math and English/language arts are most valued—their content is the base of state assessment systems, and schools often create double-blocks in the master schedule to give more instructional time to them. Science and history/social studies round out the core. And then there’s the rest: art, music, health and physical education, social sciences, engineering and technology, etc. These supplemental courses are given less time in the schedule and are often the first to go when budgets get tight. It’s hard to create a learning environment that develops the whole child in this kind of environment; so why do we separate “core” subjects from other subjects in schools?

Infusing Arts Into the Education Model

We started to explore this question and how we could create a learning environment that infuses the arts into our personalized-learning-driven academic model while designing AIM. The learning model for the creative arts school is student-centered and arts-infused. Growing to serve students in 7th through 12th grades, the school will offer middle school students exposure to various art forms including voice, dance, and visual arts. As students progress onward through high school at AIM, they will have the opportunity to choose a focus area within the arts. The arts will be infused into the personalized learning academic model used throughout the Distinctive Schools network, providing opportunities for both academic and artistic learning and development.

Since AIM is the first school in the network most importantly, they support each other.

Collaborative Accountability

When teachers go from being neighbors to roommates in a personalized-learning environment, they have to learn to live in close proximity and often have to set parameters on how the living arrangement is going to work.

This looks different across all schools, especially depending on the setup of the learning space. Adaptability and communication are necessary when it comes to these day-to-day hurdles in a learning space. Teachers must be willing to express their feedback to other teachers so that these obstacles do not affect student learning.

Teacher leadership is a critical role to fill to ensure a team of teachers continues to work productively, maintains open communication channels, and keeps itself accountable. Each TTO school, for example, has an appointed math director whose responsibilities include maintaining the vision of culture for the team. This person is expected to hold the team to the agreed upon procedures in their learning space and also recognize strong teaching strategies that can be shared with the team. This way, teams are in a constant cycle of improvement.

Intentional Reflection

Teachers in a personalized-learning model should meet as the school year progresses to revisit some of their practices. This can be done during midyear professional-development days or during a dedicated common-planning time. Ways to evaluate this effectiveness can be anything from qualitative teacher feedback to quantitative data from student grades or test scores. Setting aside this time for reflection and discussion allows for a true assessment of how well things are going, while creating an opportunity for improvement.

An example of this was seen at Brainerd High School and Howard School of Academics and Technology in Chattanooga, Tenn. Led by the director of instructional support, Sarah Towler, these teams set aside a day at the beginning of the second semester to discuss best practices utilized within their implementation of TTO. Together, the teachers discussed the success in the first semester, where students had grown academically more than expected. It was through the teacher collaboration and dedication to the individual needs of students that this outcome was possible. In this time, teachers were able to reflect about how they worked best together and how they wanted to improve on that work in the second half of the year.

Personalized learning is a shift for everyone involved. When teachers adopt a growth mentality and execute the model with fidelity, everyone benefits. Students are held accountable because they know that the same routines, rules, and procedures are expected with every teacher they encounter. They know that certain behaviors will result in the same consequences, no matter where or how they are learning that day. In turn, teachers are then able to rely on the systems they have set and can focus on effective student learning every day.

Molly Farrell, is a site operations manager for New Classrooms in Tulsa, Okla.
to infuse the arts into a personalized learning model, we assembled a team of arts educators and academic-content teachers from across our network to help authentically integrate the arts into the academic program.

“Having both arts and humanities specialists collaborating was invaluable—helping one another to understand the way we think about learning and how we interpret work was a really powerful experience,” arts educator Molly Quinn explained. “There was some struggle initially between creative and analytical ways of thinking, but we grew together and developed a strong path forward.”

This team became familiar with arts integration and how it benefits students. They pored over the National Core Arts Standards and crosswalked them with the Common Core State Standards to see where natural overlap exists. From there, the team collectively examined one 7th grade English unit to see what arts standards were already covered by the project and ways to further integrate the arts. The discussion and collaboration led to the development of a unit in which students will learn the technical and creative skills in writing and performing for a podcast. The initial project required students to conclude with a debate; the arts-infused project concludes with students sharing their debate via podcast, followed by a critique and discussion with their peers. The core objectives of the project are reached with the additional engagement and creative elements the arts provide.

The Value of Authentic Arts-Making

A major goal for the group of educators was to ensure that the integration of the arts standards was not a forced “add on.” The projects need to be authentic to truly engage students and be successful.

“The arts are actually tailor-made for personalized learning, they just inherently fit that model and allow the learner so many different pathways to success,” music teacher Frank Cademartori said. “The hardest part, though, is making sure the art-making is authentic; true arts integration has the student learning through the process. I’m so in love with the potential of arts integration and its power in the classroom. It can appeal to so many different types of learners and can seamlessly link content to skills.”

English educator Rachael Beucher said it was critical to have both arts and academic perspectives around the table. “The level of collaboration was higher and more valuable because we had experts from both sides of the curriculum working together to take existing projects and make them more even more amazing by incorporating the arts standards. It also allowed for us as educators to think about the needs of our students and allow more ways for them to show us their learning through a different lens.”

This experience helped to provide a framework for arts integration in year one of an arts-infused middle school model. This process is the foundation AIM hopes to use as a springboard to further intertwine the arts with academic content. This team of educators was challenged by the task of integrating arts into a personalized learning model but clearly sees the benefits for student learning.

“In order to incorporate the arts into a project, it is more difficult than one would think,” Beucher reflected. “The art standards are equally challenging and rigorous, and it takes careful consideration as to how they can align to Common Core Standards and not just add to a task but enhance it. The benefits of infusing arts into a personalized environment are endless.”

Jin-Soo Huh, is the executive director of personalized learning at Distinctive Schools.
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