Policies and practices that support flexibility in providing equitable learning opportunities for all students
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In March 2020, the arrival of the global COVID-19 pandemic caught many governments, businesses, and educational institutions by surprise. With schools closed and with reopening dates uncertain, many wondered how the pandemic might impact education in general and K-12 in particular. This question sparked the interest of Stanley Thompson, Ed.D., chair of the University of Pittsburgh Institute of Politics (IOP) Education Policy Committee and member of its Board of Fellows. He viewed the impending challenges as opportunities. Specifically, he wondered what lessons could be learned from the challenges experienced during the shutdown in terms of improving flexibility, equity, and innovation in the K-12 system. What barriers could be removed, or what policies and practices could be put into place, that would enable schools to respond to crises more quickly or effectively in the future? Similarly, could any of these changes provide opportunities for schools to become more flexible and equitable in times of noncrisis as well?

During the COVID-19 pandemic, inequities in the delivery of education within and across districts related to differences in school and district readiness to respond to crisis and provide continuity of education. These inequities were exacerbated by inflexible policies at the state and local levels.

In response to this problem, the IOP conducted an investigation of the types of public policy, operational policy, and practices that enabled schools to respond rapidly with flexibility, demonstrate continuity in instruction, and maintain student engagement throughout the crisis. By examining both best practices as well as barriers caused by the existence or omission of public or operational policy, the IOP has identified solutions that will support nimbleness and capacity in all schools.

"I am convinced that the education system we knew and followed before the pandemic has become one of its many casualties. Needless to say, the ‘next normal’ must provide alternatives and equitable pathways for learning and living to move us beyond COVID-19’s disruption and devastation."

— Stanley Thompson, Ed.D., chair, Institute of Politics Education Policy Committee and Senior Program Director of Education, The Heinz Endowments
In its role as a nonpartisan source of evidence-based research on key policy issues and a trusted cross-sector convener with an already-existing Education Policy Committee infrastructure, the IOP was well positioned to fast-track this policy conversation and engage policymakers in a discussion that can advance the systemic changes that will be needed. The main aspects of this examination included:

• Understanding inequity in the K-12 system as it was further amplified by the crisis and also as a chronic issue in K-12 education
• Examining flexibility in the K-12 system as it is impacted by policy, administration, and practice
• Examining existing policy gaps in Pennsylvania
• Understanding policy development in other states with similar goals
• Identifying best and promising practices
• Prioritizing an educational model that supports effective crisis response

The goal of the Learning from Crisis project was for the IOP, with input from regional leaders and policymakers in education and members of its Education Policy Committee, to learn from the disruption caused by the COVID-19 crisis to inform overarching policies and practices that support flexible, high-performing learning environments that have the potential to improve learning outcomes and equity in education. In addition to crafting recommendations for state and local action, this report is designed to support and inform future efforts to address equity and flexibility in education in southwestern Pennsylvania and the commonwealth as a whole.

Equity
According to the National Equity Project, educational equity will be achieved when “each child receives what they need to develop to their full academic and social potential.”⁴ The Pennsylvania Department of Education defines equity as “every student having access to the educational resources and rigor they need at the right moment in their education across race, gender, ethnicity, language, disability, sexual orientation, family background and/or family income.”⁵ Equity in education requires that every child receives what they need to achieve at a high level, and the education system becomes equitable when a student’s success or failure can no longer be predicted by social or cultural factors.⁶

Valerie Kinloch, Ph.D., Renee and Richard Goldman Dean of the University of Pittsburgh School of Education, describes this multifaceted approach to equity as illustrated below:

Flexibility
Flexibility is critical to the creation of equitable education systems because, in such systems, children’s needs determine the flow of resources, supports, and opportunities to students, families, and school communities. Flexible state policy gives leaders of school districts the authority to make decisions and support actions that help students, and the collective community, to thrive.

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Methodology and Process
Methodology and Process

In conducting this project, the IOP used a multimodal methodology and process, leveraging the expertise of the IOP’s Education Policy Committee and utilizing the following: research and environmental scans; analysis of the Pennsylvania School Code and related statutes; review of relevant legislation; surveys; and interviews with legislators, practitioners, representatives from advocacy groups, and parents.

For a full review of the IOP’s methodology and process, please see Appendix A.

Key Tensions: Navigating the Pandemic Environment

As the committee examined school districts’ responses to the pandemic, several key tensions emerged. They included:

- **Flexibility/accountability:** How do policymakers create flexibility in attendance and assessment while maintaining a system of accountability?
- **Public health/student well-being:** How do school districts balance concerns over the physical safety of students and staff during in-person instruction and the desire to operate in accordance with federal, state, and local public health guidance, with concerns over the academic, social, emotional, and other needs of students in remote and hybrid learning environments?
- **Policy/practice:** What changes could or should be made through policy at the federal, state, and/or local levels, and what changes could or should be made through practice?
- **Individualization/Standardization:** How can school districts ensure that students receive an education that meets their unique needs while providing instruction in a format that favors grouping by grade level or ability.
Challenges in the Era of COVID and Beyond
Challenges in the Era of COVID and Beyond

The onset of the COVID-19 pandemic highlighted disparities in education, both nationally and in our region. These disparities, many of which are rooted in longstanding economic inequality and systemic racism, are present not just in the education sector but in society at large. There was a general consensus that all students would experience, at the very least, some level of learning loss as a result of the switch to remote learning.

Researchers at RAND who have been studying learning losses over summer vacation for the better part of a decade offered the following assessment: “Some kids are in danger of getting left behind; they're the ones who can least afford it; and it will take more than a standard school year to help them catch up.”4 However, there was also the fear that the pandemic and school districts’ varying responses to it would exacerbate existing inequities in the K-12 educational system both within and across schools.

In terms of additional impacts on students and families in southwestern Pennsylvania, the disparities primarily revolved around:

• Disparities in access to and effective use of technology and broadband internet
• Disruptions in the provision of special education services
• The physical, mental, social, and emotional well-being of students

“The COVID-19 pandemic clearly exacerbated existing disparities in access to technology. Simultaneously, it heightened the need to provide greater social, emotional, and academic supports for students across a variety of settings.

— State Representative Dan Miller, Democratic Caucus Chair and member, IOP Education Policy Committee

Technology

Many students faced greater difficulty in accessing online education as a result of one or more of the following:

- The district did not have a 1:1 technology program in place at the start of the pandemic or a plan for flexible instruction.
- Students and/or teachers resided in homes where internet access was not available or not affordable.
- Digital literacy ranged significantly within and across districts — teachers and families did not have the necessary computer literacy skills to navigate the myriad platforms used by schools to deliver remote learning.

Some districts attempted to mediate this divide between students with and without devices or internet access by providing paper assignments and distributing work through websites or social media, while others relied on outside sources to help purchase and distribute devices, provide training to students and families, and offer hotspots and wi-fi to those who needed it.

In many cases, districts serving families in rural areas had significant percentages of their populations unable to access high-speed internet. In other areas, insufficient infrastructure, high costs, or administrative decisions by school leaders left students without devices for prolonged periods of time. Even in areas where access was possible, the quality of the connectivity proved to be problematic, especially in homes where multiple students or adults were attempting to connect and stream at the same time. Conversely, many schools and districts were able to pivot within days of the shutdown to a remote learning environment that featured asynchronous and synchronous instruction.

There are several reasons why districts may not have had 1:1 technology programs in place at the start of the pandemic, including families’ lack of internet access, lack of community buy-in, or lack of resources to purchase software and equipment. However, in some cases, it was due primarily to school district priority setting. In reference to the focus on the digital divide during school closures, Superintendent Hamlet of Pittsburgh Public Schools stated, “We’ve been talking about the digital divide in our district for years now, but what have we really done about it?”

Issues of technology inequity were not created during the COVID-19 crisis, only exacerbated, and school districts made explicit choices whether to provide and support their students’ online learning.

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6 Ibid.
Special Education

In addition to equity issues in technology access and use, the COVID-19 pandemic raised concerns about students with special education needs and the quality of their education during school closures. Almost one in five students in Pennsylvania has an identified need for special education, and many more are likely to be unidentified. During the pandemic, the challenge of meeting individual student needs within a system that was designed to treat everyone the same became abundantly clear as schools scrambled to determine how to meet the requirements outlined in students’ individualized education programs (also called IEPs) and 504 plans under remote conditions. Faced with the challenge of providing equitable and accessible learning opportunities remotely, some districts chose to simply delay the provision of services to refrain from providing remote education at all students at the onset of COVID in order to avoid potential legal challenges related to “free, appropriate public education,” or FAPE.⁷

A nationwide survey from ParentsTogether published in May 2020 found that about 40% of families with a child with special education needs were not receiving any services or support as a result of school closures and the transition to distance learning.⁸ Similarly, about 20% were not receiving all of the support or services their children required, and 35% of families reported low levels of remote learning, in comparison to less than 20% of families with children in general education.⁹

The results from this survey provide insight into the concerns of education equity for students who require additional services and support. Additionally, students whose needs involve services across multiple agencies or systems such as those in foster care, in the juvenile justice system, or who face homelessness, face even greater challenges and disadvantages.

During the summer of 2020, the Pennsylvania Department of Education (PDE) crafted guidance regarding how to design a school environment that addressed the unique needs that all students would have during the 2020-2021 school year, regardless of how schools planned to return. These included guidance on how to adapt the multi-tiered support system that is currently in place to support students with special needs and guidance on how to address staff and student wellness more broadly.¹⁰

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⁷ See Section 504 of the federal Rehabilitation Act of 1973, which guarantees all students, regardless of ability, access to a “free and appropriate public education.” https://www2.ed.gov/about/offices/list/ocr/docs/edlite-FAPE504.html


⁹ Ibid.

Student Health, Safety, and Well-Being

In addition to impeding academic progress, the pandemic and the transition to remote learning had a substantial negative impact on the well-being of students. Upon the closure of schools, one of the first concerns was for students who were living in food-insecure homes or unsafe environments. Many schools worked with local agencies in their communities to set up meal pick-up spots, and free meals for students continued throughout the pandemic once the federal government approved the removal of income restrictions that are normally in place. However, logistical challenges, fears of COVID-19 exposure, and the lack of funding resources threatened these vital programs, leaving many students without essential access to meals. Furthermore, there were strong concerns regarding child welfare from the increased time at home. Most filings through state child-abuse hotlines come from mandated reports, specifically school staff, and child-abuse hotlines experienced a noticeable drop in calls following the shutdown. One research study discovered that, during the months of March and April 2020, Florida’s statewide child-abuse hotline received 27 percent fewer calls than expected. In Pennsylvania, the ChildLine hotline reported a 16 percent decline in the number of calls received regarding potential situations of abuse or neglect and a 22 percent drop in the number of more serious abuse allegations over the course of the past year. With families spending increased amounts of time at home, there are fears that economic pressures, substance use, and other factors could increase the threat of child abuse or neglect.

During remote learning, students were forced to adapt to an unprecedented way of learning, causing them to frequently miss classes and underperform. Attending school virtually became especially difficult for students with instability in their homes, a lack of access to required technology, and the collective trauma of the pandemic on families. Moving forward, we need to set clear expectations for attendance and provide the supports needed within schools and communities to help students meet those expectations.

— State Representative Summer Lee, member, House Education Committee

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Although student mental health has always been important to schools, the separation of students from the classroom and their peers has exacerbated these concerns. Schools that had plans in place to support their students’ emotional and mental health have been better equipped to handle the social and emotional issues associated with remote learning. In addition, schools that had connections with families in place prior to the pandemic were able to leverage those effectively to stay in touch with students. The reinforcement of social and emotional health as part of school curriculum before and after schools reopen will be essential in ensuring that students return ready to learn.

Concerns about student well-being during remote and hybrid learning have caused communities and others to put pressure on schools and districts to reopen, sometimes in conflict with public health guidelines. Pine-Richland High School, located in northern Allegheny County, released the results of a survey of their senior students regarding their mental well-being. The survey revealed that many of the students were struggling with remote learning and had increased social emotional difficulties, with 78% of the respondents reporting “mental health concerns” since the beginning of school closures, citing isolation, remote learning, and the loss of extracurriculars and social activities as reasons. In addition, students disclosed that they felt mentally tired and lacked motivation. This isolation could have far-reaching consequences given that social interaction is critical for adolescents (ages 10-24), a period of development that is also characterized by increased susceptibility to mental health issues. Although the ability to interact online may have mitigated some of the potential negative consequences, the potential short- and long-term consequences of social distancing on adolescents remain to be seen and should continue to be carefully monitored.

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19 Ibid.
Policy Barriers to Effective Response and Recovery
Policy Barriers to Effective Response and Recovery

In moving to remote learning, specific policy and practice challenges relating to attendance and assessment immediately emerged at the federal, state, and local levels. Many of the barriers to equity and quality in our education systems that have become more visible during the COVID crisis are rooted in industrial-era models of education prevalent in our region. Schools have been designed to serve age-based cohorts of children by teaching a standard curriculum and using annual assessments to determine whether desired learning has taken place. Performance expectations vary greatly among educators, and grading systems do not effectively communicate student progress to students and families.

Although teachers may be encouraged to differentiate their instruction to meet student needs, modification opportunities are limited. Learning is defined, either in practice or in statute, as taking place during certain hours, within the classroom walls, and connections to families and communities are often tenuous. Students who struggle in this one-size-fits-all model are, with varying levels of effectiveness, provided accommodations and supports to help them cope. However, the system is not designed to meet their individual needs or to ensure each child’s success.

“The K-12 system of education is not currently designed to produce equitable results. Schools need to work better with families and communities to create a system that places children at the center.”

— State Representative Jake Wheatley, Democratic Chair, House Professional Licensure Committee and member, IOP Education Policy Committee


Attendance

At the state level, two specific requirements in the school code created confusion related to attendance in a remote learning environment. Pennsylvania’s Public School Code of 1949 requires all schools to provide 180 days of instruction per school year. Title 22, Section 11.3 of the Pennsylvania Code specifies the amount of hours of instruction that students must receive each year and outlines the types of activities that qualify toward those hours (900 at the elementary level, 990 at the secondary level). Although that was addressed for the 2019-2020 school year through Act 13 of 2020 (see box), those provisions were only temporary, and the system will revert to existing laws unless additional legislative action is taken.

The process of taking attendance remotely, and what exactly constituted “present” for purposes of attendance, varied considerably by school district, by grade level, and sometimes even by classroom, a process that was confusing for parents, students, and other observers of the K-12 system, including legislators. One parent of high school students in the southwestern Pennsylvania region expressed, “Even though school is virtual, there needs to be an expectation of making sure students are present.”

One approach to attendance when schooling can be done in person or online, synchronously or asynchronously, is to track engagement instead. Are students checking in and being held accountable for work done remotely? Are they participating in class discussions, either live via Zoom, via the chat, or via discussion boards or small-group work? Finding ways to track those types of activity, most of which were new to schools, and determining what to do if students are not demonstrating engagement was a part of the learning curve for educators and school systems during the pandemic.

Act 13 of 2020

Act 13 of 2020 addressed many of the immediate barriers faced by districts at the outset of the pandemic and the resulting closure through waivers and other provisions. Passed by the legislature on March 27, 2020 and effective immediately, the provisions of Act 13 waived the following provisions for the 2019-2020:

- The minimum number of instructional days for K-12 students in public and non-public schools (180)
- The cap on the number of flexible instruction days that schools could utilize
- The requirement related to school employee performance assessment and data
- The minimum hours required per year for career and technical education programs
- The minimum number of instructional days for pre-kindergarten programs provided through Pre-K Counts (180 or 160 in some cases)

The legislation also instructed the Secretary of the PA Department of Education to request a waiver from the federal testing requirements to facilitate the cancellation of the PSSA, and the NIMS and NOCTI exams (related to career and technical programming) were cancelled. While Act 13 was helpful to schools during the spring 2020 closure, no similar provisions have been made for the 2020-2021 school year or beyond.

A complicating factor is the expiration of the mandate waiver law that previously existed until 2010, which allowed school districts to apply for waivers of specific provisions of the school code, provided they could offer justification as to the need. Legislation that would bring back the program has been introduced in the 2021-2022 session.

22 Section 1501 of the Public School Code of 1949 states, “All public kindergartens, elementary and secondary schools shall be kept open each school year for at least one hundred eighty (180) days of instruction for pupils. No days on which the schools are closed shall be counted as days taught…”
23 See Title 22, Section 11.3 of the Pennsylvania Code. For more information, visit https://www.education.pa.gov/Policy-Funding/BECS/Purdons/Pages/InstTimeAct80Exceptions.aspx
24 See Senate Bill 73 of 2021-2022, introduced by Senator Wayne Langerholc. Similar language is also included in SB 1 of 2021-2022, introduced by Senator Scott Martin.
25 Christine Zundel, interview with author, March 22, 2021
Assessment

Grade-level-based assessments are required by both the federal and state governments. Provisions in the Every Student Succeeds Act (ESSA) call for a 95 percent participation rate in annual assessments. In the spring of 2020, immediately after the shutdown, there was a universal call for a waiver from those requirements, which the federal government granted for 2020. Some consideration was given to waiving the testing requirements for 2021 as well, but in February of 2021, the federal government released guidance that would permit flexibility for states in how and when tests were administered. In Pennsylvania, this resulted in tests being scheduled later than usual, in some cases delayed until the fall of 2021.

One of the concerns about the cancellation of testing was the potential loss of annual data that are used for many purposes — research as well as teacher and school evaluations, for example. However, the annual Pennsylvania System of School Assessment (PSSAs) has long been a source of frustration for school district leaders. One school leader compared it to an autopsy because the results arrive too late for schools to use the information to change instructional practices.

In a September 2020 report, the Center for American Progress said that the main argument in favor of assessing students in 2021 would be to collect meaningful data that would help schools and families understand the learning needs of students after a very unusual year of education. Specifically, they identified four dimensions that should be measured in order to develop a full and accurate picture of student needs:

- Conditions for learning
- Social emotional learning
- Student engagement and attendance
- Family engagement

Testing definitions

When it comes to assessments, one size does not fit all. Below is a description of three types of testing and when and why they are used.

- **Diagnostic**: designed to assess students’ starting points and collect data that can inform the development of instruction going forward
- **Formative**: occurs throughout the year to provide feedback on student learning progress; used to inform teachers and families about the need for additional support in particular areas of instruction
- **Summative**: provides data on school performance overall and shows trends in learning among various groups of students

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28 Ibid.

29 Ibid.
Rebuilding a Flexible, Equitable, and Innovative Learner-Centered K-12 System in Pennsylvania
Outward appearances early in the pandemic suggested that might be the case, as schools with 1:1 technology and flexible learning days already built into their schedules were able to start up quickly without missing any school days. However, it quickly became clear that there were other factors at play. Some districts had “done the work to shift to putting students at the center” throughout their communities. Having pre-existing relationships with families allowed for frequent communication and feedback that informed rapid improvements and enabled districts to be responsive to emergent needs. Other districts had invested in high-quality, aligned curricula and robust technology systems to support individualized teaching and learning practices, which gained new importance when school buildings closed.

In sorting through the overwhelming number of challenges presented earlier in the pandemic and identifying potential strategies for improving flexibility and equity in K-12 systems, the IOP committee discovered that, essentially, schools needed to become more learner-centered. Specifically, through the process described above, the committee selected the development of personalized learning as the most promising overarching strategy for moving the commonwealth's K-12 system toward greater resilience.

According to researchers at the International Association for K-12 Online Learning (iNACOL), "Compared to traditional education models, in personalized, competency-based learning environments students have a much greater degree of flexibility in their learning — both in terms of the pathways they take to mastery of the same rigorous standards, and the ways they use time.”

This perspective resonates with those in the field. Current and former superintendents in the region interviewed for this report identified multiple characteristics of districts that were able to respond quickly and effectively at the onset of the pandemic, which aligned with a developed personalized learning infrastructure. Specifically:

- Their school boards supported shifts in practice to improve student success and well-being.
- District and building leaders were aligned in their focus on students' academic and psychological needs in their work.
- School staff had prioritized developing strong relationships with each student and their families.
- They had already provided professional development and support to teachers in learning new approaches to teaching that incorporate more differentiation and personalization; therefore, the teachers were more comfortable shifting their own practices toward understanding individual students and their needs to inform instruction.
- They had a district-wide, aligned curriculum that represented best teaching practices and continuum of instruction in grades K-12.
- They had already built a 1:1 technology infrastructure.
- They had an established learning management system with clear expectations for its use by staff and students.

These elements of preparedness for the crisis were also foundational to the development of learner-centered education.

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What Is Personalized Learning?
What Is Personalized Learning?

In recent years, the idea of “personalized learning” has gained traction both regionally and nationally as a way to describe an approach to education that focuses on the strengths, needs, and interests of each individual student. Although specific definitions of personalized learning vary, there are recurrent themes in practitioners’ and advocates’ descriptions:

- **High expectations for all:** The education system is designed to provide personalized supports for every student to achieve high standards.

- **Flexibility:** In contrast to the traditional "one-size-fits-all" approach to education, instruction is adapted and individualized according to students’ learning needs. Learning takes place in the classroom, virtually, and in the community.

- **Learner agency:** Students have "voice and choice" in making decisions about what and how they learn, are deeply engaged in their learning, and grow to take ownership over their own learning process.

- **Whole-child focus:** Education provides the conditions and supports for students to develop the knowledge, skills, and dispositions to become lifelong learners and thrive in the economy of the future.

- **Strong relationships:** Each student forms stable, deep connections with caring and skilled adults who know them and their families and work to ensure that their individual physical, social, emotional, and academic needs are met.

- **Resource allocations match need:** The school’s resources flow to where they are needed most to support maximum learning for every child.

In practice, personalized learning often includes the use of technology to individualize instruction, project-based learning, and opportunities for real-world application of skills and knowledge. It involves a wide range of adults – from teachers to parents to adults in the community — who support and guide learning inside and outside of school. Community-based, engaging learning that has relevance for students’ lives is prioritized and valued. Student needs, strengths, and progress toward learning goals are kept up to date in “learner profiles,” which inform the design of the education they receive. All of this information is made easily accessible to all learners and the networks of adults who support them so that they can coordinate their efforts and ensure that every child receives needed educational, social, emotional, and health supports and services, regardless of economic circumstances.

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What is Competency-Based Learning
What Is Competency-Based Learning?

Districts and schools committed to personalized education often advance their efforts by adopting “competency-based” structures to replace their traditional ways of monitoring and assessing student progress. Competency-based systems clearly define what needs to be learned and how students progress toward learning it.36

In competency-based education, students work toward specific, measurable learning objectives called competencies. These competencies describe learning expectations that are rigorous, are aligned to standards, and incorporate knowledge and skills essential for college and career readiness.37 Students complete work that corresponds to their level of achievement rather than a specific grade, advancing to the next level of learning along pre-defined “learning progressions” or pathways when they demonstrate mastery of a set of competencies. Schools carefully monitor the pace of learning and provide supports to ensure all student meet targets to stay on track to graduate ready for college or a career.

Competency-based education requires assessments that clearly indicate student progress toward mastering individual competencies. Such assessments occur continually and provide real-time information that can be used by teachers and other adults to plan student learning experiences and provide targeted differentiation and supports.39 Evaluation of student mastery of specific competencies occurs when students are ready to demonstrate their skill.

For a comparison of traditional and competency-based education, please see the table on the following page.

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What is Competency-Based Learning

Traditional Versus Competency-Based Education

<table>
<thead>
<tr>
<th>TRADITIONAL</th>
<th>COMPETENCY-BASED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessments are used to evaluate and sort students. High-stakes standardized tests are given once at the end of the year.</td>
<td>Assessments are used to guide daily instruction and demonstrate student progress toward achieving competencies. Students are evaluated when they are ready and are given multiple ways to demonstrate their skills.</td>
</tr>
<tr>
<td>Grades reflect standards of individual courses and teachers.</td>
<td>Grades illustrate students’ level of mastery of specific competencies.</td>
</tr>
<tr>
<td>Students are expected to master state grade-level standards.</td>
<td>Students are expected to master competencies that are rigorous, are aligned to state standards, and incorporate knowledge and skills essential for college and career readiness.</td>
</tr>
<tr>
<td>Students advance at a pace determined by the educator, regardless of mastery.</td>
<td>Students progress as they demonstrate mastery. Supports are provided to ensure all students stay on track to graduate ready for college or a career.</td>
</tr>
</tbody>
</table>

Assessments

Assessments are used to evaluate and sort students. High-stakes standardized tests are given once at the end of the year.

Grading

Grades reflect standards of individual courses and teachers.

Mastery

Students are expected to master state grade-level standards.

Pace

Students advance at a pace determined by the educator, regardless of mastery.

Personalized, Competency-Based Education in Support of Equity

Educators focused on equity frequently advocate for personalized and competency-based education in tandem. In the absence of structures to guarantee that every student stays on track to mastering all required competencies, personalizing learning risks exacerbating existing inequities. Without personalization, competency-based education does not ensure that all learners get the tailored support and instruction they need to achieve success. However, personalized and competency-based approaches paired together with an intentional focus on producing equitable outcomes can meet students where they are and provide structured pathways for each of them to graduate on time, as well as college and career ready.

41 Ibid.
43 Competency-based approaches employ flexible pacing, rather than self-pacing. Flexible pacing allows for adjustments while ensuring students learn to high standards and graduate on time, college and career ready. For more information, visit https://www.rand.org/pubs/perspectives/PE314.html
Personalized Learning in Practice: Building 21

As a charter school network, Building21 has additional flexibility that is not afforded to traditional public schools in terms of assessment and attendance. It has used that flexibility to take significant steps towards personalized, competency-based learning.

Building 21 is a non-profit organization that aims to make learner-centered schooling a reality by supporting a multi-state network of schools and districts serving more than 3,000 students to provide personalized, competency-based education. Its flagship laboratory school is a Philadelphia public high school where students engage with a learning model built around five key components:

- **Personalized learning pathways** shaped by students’ interests and strengths
- **Strong relationships** among students and caring adults
- **Problem-based learning** focused on school and community impact
- **Real-world learning experiences** that take place within and outside of school walls
- **Competency-based assessment** that ensures student progress toward mastery and informs support

This model is designed to reflect current knowledge about the learning sciences, how teens develop, student engagement, and trauma-informed services. It intentionally adapts to “meet learners where they are” while supporting them to achieve college and career success.

To realize the vision of this model, Building 21 reimagined traditional school systems as student-centered. For tracking and reporting student progress, the organization needed ways to track learning across school and in the community, document performance (versus course completion) and progress toward mastery (versus grades), and transparently show student growth. The Personalized Learning Profile (PLP) was developed to meet those requirements. The PLP is a set of online dashboards that show student progress and growth in real time, supporting student and teacher goal-setting and planning, as well as productive communication between school and home. It essentially replaces traditional report cards by providing more specific and timely information about what students have learned and what they need to accomplish to be on track for graduation and beyond.

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52 Ibid.


>> continued

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The PLP is competency-based, meaning it shows progress in “essential skill-sets of post-secondary readiness.” Within its Learning What Matters (LWM) Competency Framework, which Building 21 co-developed in partnership with the School District of Philadelphia, there are 16 standards-based student competencies and related performance levels for domains ranging from mathematics to visual art to health and wellness. The levels represent a continuum of performance from grade 6 through 12, which guide individual student progress toward their goals. The figure below provides an example of this journey toward mastery for one specific skill.

Building 21 has a similar focus on growth for its adults. Recognizing that the role of teacher shifts significantly and that new skills and mindsets are required to teach successfully in this school model, the organization has developed five teacher competencies: building relationships, personal and professional growth and development, mentoring through advisory, designing for engagement and impact, and facilitating personalized learning. Teachers progress through four levels from novice to expert/mentor according to the rate of their development instead of years of experience.

Building 21's graduates have yet to score in the top 50% on Pennsylvania's statewide standardized tests. However, 88% of students in its first two classes have graduated (compared with an average of 70% for high schools with comparable student populations), less than 0.5 percent drop out annually, and the school has a 90%+ retention rate. In 2019, the organization was recognized by the Bill and Melinda Gates Foundation and awarded a Networks for School Improvement grant to support its network in boosting graduation and college-going rates for low-income students and students of color.

Looking toward the future, Building 21’s founders envision new possibilities for personalized, competency-based education. What if interest rather than age determined a student's courses and each student could demonstrate progress appropriate to ability on course-related performance tasks? What if learning could happen anywhere, so that school becomes a set of designed experiences rather than a building? What if learning profiles and information could travel with high-mobility students – and if schools, children's services, the juvenile justice system, and other youth agencies all used this same information to reduce interruptions in education and services? And what if shared, transparent performance levels clearly defined “college ready” for high schools and post-secondary institutions alike, taking the mystery out of college preparation and creating a more equitable system?

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56 Ibid.
60 Ibid.
Personalized, Competency-Based Learning Research

Personalized, competency-based learning approaches have supported student achievement gains in specific schools and districts across the nation, yet research regarding their overall effectiveness and the identification of best practices is currently limited. Researchers at RAND Corporation, who have conducted the largest study of personalized learning to date, point to several challenges present in the current evidence base. For one, schools implement a wide variety of practices under the umbrella of personalized learning, which makes it difficult to draw firm conclusions about the efficacy of specific practices or the approach overall. Additionally, there are no long-term studies that provide opportunities for analyzing the impact of personalized learning on students’ success later in life. However, the results of the RAND study suggest that greater use of personalized learning practices may be related to increased student achievement, and researchers recommended further study to confirm this finding.

Even in the absence of “comprehensive, rigorous evidence,” a number of schools and districts across the country are implementing promising personalized learning approaches while the research catches up with practice. In this context, the principal investigator on the RAND report, John Pane, Ph.D., offered guiding principles for moving forward in ways that are aligned with the current knowledge base:

• Embrace rigorous empirical evidence where it exists.
• Align with principles of learning science.
• Focus on productive use of student time and attention.
• Maximize productive use of teacher time.
• Use rigorous instructional materials.
• Monitor implementation and prepare to adapt.

Taken together, these principles encourage educators to carefully examine existing evidence related to technology-based learning products, curriculum materials, and other innovations before investing the time and resources necessary to incorporate them into students’ learning experiences. Where information about a specific component is absent or limited, educators can look to research related to cognition and learning to determine whether that component is likely to be effective. Pane cautioned that teachers new to personalized learning may be tempted to try new, untested products. However, many years have gone into the development of existing standards and curricula, and associated materials can often be adapted for use within a personalized learning approach. The principles also call out student and teacher time and attention as the most valuable resources in the learning process and suggest that personalized learning approaches must be designed to use both in order to maximize benefit for students. Finally, they urge educators to build in ways to determine whether the personalized learning practices they implemented have the desired results or unintended consequences. Doing so can produce knowledge that can be used to improve locally and inform the field.

Applying these principles to competency-based approaches specifically, Pane sees many reasons for optimism, as long as implementation is carefully monitored and adjusted. For example, empirical evidence suggests that regular interaction with teachers combined with education technology that provides data and tools for individualizing content and pacing is likely to be valuable for student learning. In addition, an established learning theory predicts that students learn best when they are “ready,” meaning that they have mastered prerequisite skills and knowledge. Competency-based learning is aligned with this theory because it is designed to optimize the time students spend learning at their own level.

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65 L.S. Vygotsky theorized that learning takes places within the learner’s “zone of proximal development” (referenced in https://www.rand.org/pubs/perspectives/PE314.html)
Regional Momentum for Personalized Learning

In the quest to improve equity and quality in our education systems, there is much to learn from regional innovation efforts. Southwestern Pennsylvania has been an incubator of new ideas for improving learning for years, and the fruits of those efforts are becoming increasingly evident. Remake Learning has been a central convener and supporter of this renaissance. Formed in 2007 as an informal working group, Remake Learning has grown to include more than 600 individual and organizational members, all of whom are collaborating to ignite engaging, relevant, and equitable learning practices. In recognition of the network’s impact, HundrED recognized the Pittsburgh area in 2019 as its first North American “Spotlight” region for the depth and breadth of inspiring work happening in its communities to help students flourish. The Remake Learning network has also partnered with Digital Promise, another internationally recognized organization aiming to accelerate education innovation, to create an Education Innovation Cluster in Pittsburgh. Five local districts have been recognized with membership in the Digital Promise League of Innovative Schools for their efforts to advance equity and excellence for every student through innovative practices that help to close the digital learning gap.

In addition to widespread participation in these endeavors to reinvent the future of learning, a number of districts and organizations in the region have committed to advancing personalized and competency-based learning through the following collective efforts. With more than 20 member districts, the Southwestern Pennsylvania Personalized Learning Network (SWPA PLN) aims to accelerate and strengthen personalized learning in the region by facilitating peer-to-peer dialogue and collaboration. SWPA PLN districts are implementing and sharing their learning about initiatives ranging from building competency-based learning progressions to designing individualized learning plans based on learner profiles to personalizing teacher professional development.

Southwestern Pennsylvania has been an incubator of new ideas for improving learning for years, and the fruits of those efforts are becoming increasingly evident.

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67 HundrEd is a global education nonprofit with the mission of helping to improve education through impactful innovations. Its annual “Global Collection” highlights 100 inspiring education innovations from around the world. https://hundred.org/en/collections/pittsburgh-usa
68 Ibid.
70 South Fayette, Avonworth, Hampton, Baldwin-Whitehall, Elizabeth Forward — see https://digitalpromise.org/initiative/league-of-innovative-schools/
71 For more information about the SWPA Personalized Learning Network, visit https://sites.google.com/plpgh.org/web/
Practitioners, researchers, and advocates are joining together in a grassroots effort to further accelerate regional progress toward a shared, more equitable vision of the future.

In central Pennsylvania, Intermediate Unit 8 is a founding member of the Mass Customized Learning Consortium, a group dedicated to charting a new course for education by putting the learner at the center.72

A newer group, Future Ready Schools: West Virginia and Pennsylvania Collaborative,73 was started in 2019 to support education leaders in both states in planning and implementing personalized, research-based digital learning strategies for all students.74

In Pittsburgh, Personalized Learning2 (PL²) is a collaborative project of LearnLab at Carnegie Mellon and the University of Pittsburgh’s Center for Urban Education, focused on combining artificial intelligence learning software and individualized tutoring to increase mathematics achievement for marginalized students.75

Elsewhere in Pennsylvania

Looking ahead, the region is poised to make further strides in personalized and competency-based learning. Recently, Remake Learning’s Future of Learning Commission published a regional vision for post-pandemic learning that is “just, equitable, and learner-centered.”76 Included among the recommended elements were personalized and competency-based learning, along with many ideas that support their implementation in ways that ensure that all children thrive. As a next step, Remake Learning is partnering with KnowledgeWorks, a national expert in personalized learning policy and practice, to form a Remake Learning working group focused on advancing best practices and supporting policy in the region. Practitioners, researchers, and advocates are joining together in a grassroots effort to further accelerate regional progress toward a shared, more equitable vision of the future.

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75 Pilot projects are currently being conducted in collaboration with Elizabeth Forward School Districts, Pittsburgh Public Schools, Propel Charter Schools, Shaler Area School District, Homewood Children’s Village, and Boys and Girls Clubs of Western PA. http://personalizedlearning2.org/our-mission.html

Avonworth School District —
Personalizing Learning Paths for All Students

As the superintendent of Avonworth School District, Tom Ralston, Ed.D., has kept a steady focus on developing “fantastic people and good citizens who will make a difference in their communities.” Recognizing that student engagement in authentic learning experiences is fundamental to this goal, the district identified personalizing learning, project-based and interdisciplinary learning, and creative use of space and time as key priorities. The district pioneered a student-centered and cross-discipline approach to learning in its middle school, which it has since spread K-12.

Avonworth’s design prioritizes identifying and meeting the academic and psychological needs of children. The adoption of curriculum based on Wiggins and McTighe’s “Understanding by Design” along with differentiated instruction has prompted faculty and staff to learn how to understand individual student needs in the form of “learner profiles” and to design instruction and other services in response. Differentiated instruction at Avonworth focuses on the whole child by utilizing a variety of instructional methods for students based on their abilities and progress. According to Ralston, teachers have been “learning to think differently about how to teach and getting students to learn,” and as a district they have learned how to know when students are learning and to intervene quickly when they do not.

Some of the most recognizable changes that Avonworth has made involve incorporating project-based learning across the curriculum, including multidisciplinary courses in the middle and high school curriculum, and offering multiple pathways to graduation. For example, Avonworth’s middle school students partner with community members to complete projects on topics ranging from the Vietnam War to local water quality. In the high school, students are offered courses that combine English with subjects such as geography, civics, and art, and the schedule is composed of 45- and 80-minute learning blocks that accommodate a range of instructional approaches to meet student needs. The district’s pathways to graduation are similarly flexible. Avonworth offers five career pathways through its Personal Pathways Program, which is complemented by its partnership with the A.W. Beattie Career Center, which offers a wide range of career and technical education programs. This pathway model “exposes students to jobs that will match their skills and areas of interest and empowers them to emerge as future leaders and problem-solvers through project-based learning activities in the core curriculum and in their elective choices.”

Avonworth School District is a founding member of the Digital Promise League of Innovative Schools, participates in the Future Ready Schools West Virginia and Pennsylvania Collaborative, and belongs to the SWPA Personalized Learning Network. Dr. Ralston credits peer learning and collaboration with accelerating the district’s evolution toward a more personalized approach to learning, recognizing that this is a learning journey for everyone. He also cautions that although technology can be incredibly useful in supporting individualized learning, personalized learning at its best focuses on providing voice and choice, prioritizes student engagement, is designed for students to learn at different rates, and ensures quality interactions among students and teachers.

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77 Avonworth School District is a small, suburban school district located seven miles north of the City of Pittsburgh. It serves approximately 1,863 students in grades K-12. Ten percent of students are of color, 14.5% of students qualify for special education services, and 14% of student families are low income. Data retrieved from the Future Ready PA index at https://futurereadypa.org/
78 Tom Ralston, interview with the author, January 28, 2021
79 “Differentiated instruction is an approach to teaching where you actively plan for students' differences so that they can best learn. In a differentiated classroom, you will be able to divide your time, resources, and efforts to effectively teach students who have various backgrounds, readiness and skill levels, and interests.” http://www.ascd.org/research-a-topic/differentiated-instruction-resources.aspx
81 Ibid.
As we move out of the pandemic, we have an enormous opportunity to reset and move forward by applying lessons that we’ve learned over the past fifteen months and integrating the positive aspects into our ‘next normal,’ rather than simply falling back into old, inequitable routines that left so many students behind. We have the opportunity to focus on student-centered learning and to create community schools, encouraging connections and engagement on new levels. Education does not happen in a vacuum and our students need this genuine connection that will prepare them to lead successful, fulfilling lives within their communities and beyond. As the Minority Chair of the Senate Education Committee, I believe that centering our student voices in all conversations about education is the first step toward achieving these goals.

— Senator Lindsey M. Williams, Democratic Chair, Senate Education Committee
We need to make it easier for students to pursue opportunities that help them succeed after graduating from high school. This means finding ways to increase flexibility in the school day so that they can take advantage of internships, dual enrollment coursework, or similar programming.

— State Representative Mark Longietti, Democratic Chair, House Education Committee
In crafting them, the IOP Education Committee members considered the following:

- Policy change will need to occur at multiple levels (federal, state, and local), as well as in other relevant policy areas — broadband access, human services, and out-of-school time supports, for example — in order to have the greatest impact on improving equity and flexibility.

- Recommendations concerning practice should be made with the understanding that information in this area will emerge in concert with additional data on best practices in personalized learning.

- Although federal stimulus funding has provided support for short-term needs and initiatives, the committee does not wish to recommend the establishment of programming that will not be able to be sustained in the future. Therefore, none of the recommendations is designed to create an undue lasting financial burden on either districts or the commonwealth.

- Other regional and national organizations have been engaged in efforts to increase equity; expand flexibility; and/or advance personalized, competency-based learning in the commonwealth, and these recommendations are designed to build upon those efforts. A full list of organizations that served as resources to the committee is provided in the Acknowledgments section (see Appendix C).

The recommendations are categorized as either short- or long-term; whether they suggest action at the federal, state, and/or local level; and whether they are driven by changes to policy or practice.

The short-term recommendations are structured to be immediately actionable and to allow for the removal of existing barriers to flexibility that were highlighted as a result of the pandemic. Moving forward with these changes would facilitate the enactment of the long-term recommendations, which could serve as a starting point for current and future work and propose elements of a structure that would support and sustain the development of equitable, personalized, competency-based learning statewide.
Technology and Remote Learning Assistance for School Districts

Throughout the commonwealth and the country, students experienced significant disparities due to inequities related to technology that existed prior to and were exacerbated by the pandemic, as outlined in the background section. Although technology is only a part of the solution when it comes to advancing equity and flexibility, it is key to ensuring that students have access to education in unusual circumstances as well as providing individualized content to students efficiently. These are both critical components of future-ready education.

To ensure that the K-12 system is equipped with the technological resources to meet the needs of every student, policymakers and practitioners should consider the following recommendations:

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>1.</strong> Ensure that technological skills continue to be a key component of professional development for teachers moving forward by:</td>
<td>Establishing state-level requirements for technology-related professional development as part of requirements for teacher recertification.</td>
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<td></td>
<td>Sharing best practices across districts through intermediate units and the Pennsylvania Department of Education (PDE).</td>
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<tr>
<td><strong>2.</strong> Develop a statewide panel of administrators and educators to work with PDE to select a learning management system that could be provided, along with technical assistance, at no cost to school districts. Schools could choose to purchase their own learning management software if they do not wish to use the one selected by PDE.</td>
<td></td>
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<tr>
<td><strong>3.</strong> Allocate funding (from the federal Elementary and Secondary School Emergency Relief Fund) to provide all students with access to devices, and establish an ongoing funding stream for future technology repairs/replacement.</td>
<td></td>
</tr>
<tr>
<td><strong>4.</strong> For students in poverty, provide internet access, devices, and technological assistance through a fund established at the state level.</td>
<td></td>
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</tbody>
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See [House Bill 86](https://www.legis.state.pa.us/LRS/2021託2022/065731) of 2021-2022, sponsored by Pennsylvania State Representative Dan Miller
When the pandemic occurred, schools were faced with uncertainty regarding assessments, attendance, and accountability. How would schools track these key components, and how would they be held accountable for these factors?

Looking forward, adopting measures that increase flexibility for schools will not only help to remove uncertainty in future crises but will also allow school districts to experiment with new and potentially more effective or useful methods of assessment and tracking attendance in ways that allow PDE and the legislature to continue to monitor and hold schools accountable for the education of Pennsylvania’s K-12 students. This will also give school districts the flexibility they need to create more equitable learning conditions for all students.

Recommendations include:

1. Within the provisions of Title 22, Section 11.3, offer additional flexibility and specificity in terms of the activities that count as instructional time. This could include: in-person instruction within a school building, asynchronous learning activities, internships, pre-apprenticeships, dual-enrollment courses, and other out-of-school learning opportunities as identified and approved by local school districts and reported to PDE.

2. Revise Section 1506 of the PA Public School Code (relating to flexible instruction days) to a) increase the number of days available to districts and b) to ensure that districts have flexibility in how and when they use those days.

3. Use the PSSAs for data purposes only (e.g., understanding COVID learning loss and other research-related purposes) in accordance with U.S. Department of Education guidance issued in February 2021, and consider continuing this practice going forward.

4. Encourage, support, and facilitate the use of other formative assessments that school districts often use to measure student growth and competency at multiple points throughout the year. Formative assessments often are more useful to educators than statewide standardized assessments in informing the development of personalized learning plans and will be critical in understanding potential learning losses resulting from the pandemic.
SHORT-TERM RECOMMENDATIONS

Providing Additional Supports for Meeting the Needs of the Whole Child

Student well-being has and continues to be a topic of concern for legislators, schools, and communities. Although PDE has issued guidance regarding the integration of social and emotional learning, and the commonwealth has offered flexible funding under the auspices of the Safe Schools grant, which districts may use for mental health supports, efforts to address these issues and to find ways to fund them have been left largely to districts.

Student well-being is a critical component of personalized learning because personalized learning requires a comprehensive initial understanding of student assets and barriers to learning. Ensuring student well-being means that students have a safe, supportive environment in which to attend school and that social and emotional learning concepts are incorporated into the curriculum in a meaningful way. Additionally, ongoing assessment of students’ well-being is essential to facilitating growth and progression along a learning pathway. Conversely, personalized learning offers schools the opportunity to assess and take into account student well-being when designing instruction and supports.

These recommendations are designed to facilitate personalized learning as well as ensure that social and emotional well-being continue to be a priority for districts post-pandemic.

Recommendations to support whole-child well-being include:

1. Provide guidance on how to assess student and staff well-being on an ongoing basis to support intervention strategies and whole-child/family strategies, as well as share best practices from districts that have already begun this work.

2. Provide resources at the state level that support the hiring of additional social workers, counselors, and psychologists for schools, and ensure that these professionals are trained in cultural competency for the districts in which they work. Federal American Rescue Plan Act funds could also be used to support start-up costs for this endeavor, but additional state funding allocating specifically for these types of supports will be necessary in the future.

3. Work with and enable IUs to provide technical expertise for designing targeted mental health support programs that include culturally competent practices.

4. Evaluate the district’s approach to meeting whole child needs and determine opportunities to improve. This could include conducting an equity audit to determine where schools could modify existing policies and practices to create more equitable learning environments.

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83 For more information on the importance of school climate for positive student outcomes, please visit https://safesupportivelearning.ed.gov/school-climate-improvement

84 For more information on the benefits of social and emotional learning, please visit: https://casel.org/impact/

85 PDE, through PaTTan, provides a school assessment of student and staff social and emotional well-being.

86 See HB 102 of 2021-2022, sponsored by Representative Dan Miller

87 The Pennsylvania Department of Education provides equity resources for districts within their Equitable Practices hub.
Duquesne City School District recognizes the need to ensure that all students and families are supported in and out of the classroom. Over the past five years, its strategies for accelerating student academic growth and achievement also laid the foundation for the district to mobilize a swift and holistic response to the pandemic. Improvements in the academic program have included phasing in 1:1 technology for all students and teachers, installing maker spaces and a coding and robotics lab, integrating project-based learning across the curriculum, and offering differentiated professional development for teachers to utilize these new tools and resources to transform their instruction. Collaborations with the Allegheny Intermediate Unit, the Grable Foundation, Remake Learning, and the SWPA Personalized Learning Network have helped to advance these efforts.

Improvements in the academic program have been intentionally paired with initiatives that attend to students’ and families’ non-academic needs. Toward this end, the district has developed partnerships with a wide range of community agencies, with Communities in Schools (CIS) playing a central role. An assigned specialist works directly with the school, builds strong relationships with students and families, conducts home visits, and makes connections to other local service providers according to individual need. Aiding students in making a strong transition to middle and high schools in neighboring districts is another important CIS function. The specialist ensures that students and families are “known” by the district and works to integrate the efforts of those in their networks of support.

During the COVID crisis, the foundations of technology, engaging curriculum, and teacher professional development have enabled the district to repeatedly adapt its approach to instruction in response to current conditions. In the 2020-2021 school year, the district offered daily in-person school most days since October 26 as well as remote learning for all students. Teachers have continued to use the hands-on curriculum but have adjusted their lessons to accommodate both groups of learners simultaneously. The CIS specialist checks in regularly with students and families to understand how they are coping and connect them with needed services, from internet connections to meals to afterschool care. If a student is absent for more than two days, the student receives a home visit to diagnose and address any barriers to attendance. The programs and partnerships built to advance each student’s success before the crisis are being leveraged to holistically meet the needs of every child.

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88 Duquesne City School District is a very small (approximately 350 students) K-6 district in the suburbs of Pittsburgh. Seventy-four percent of students qualify for free or reduced lunch, and more than 90 percent are students of color. The district was placed in receivership and has been implementing a recovery plan since 2012. Prior to the pandemic, the district saw increasing enrollment year-over-year, and it was given approval to plan for the reopening of its middle school (closed in 2012).

89 Key stakeholder agencies and organizations include but are not limited to Keystone Educational Services for Special Education, PDE Temporary Shelter Support, Carnegie Library-Duquesne Branch, Community Foodbank, Duquesne-West Mifflin Boys and Girls Club, Duquesne Family Center (AIU3), Early Childhood Education, Head Start, and Duquesne City Public Works and Police Department. See https://www.dukecitysd.org/Page/180

84 The mission of Communities in Schools is “to surround students of the greater Pittsburgh region with a community of support, empowering them to achieve in school and succeed in life.” The Pittsburgh and Allegheny County Chapter works alongside schools as analysts, program developers, facilitators, student services managers, and trainers to promote each student’s success. See https://cispac.org/about/
As indicated in an earlier section of the report, the research into personalized learning reveals its promise to increase equity and flexibility, but more data are needed to determine which practices work best under what circumstances.

Given that most districts are in an exploratory phase with regard to this work, the commonwealth should:

1. Develop a grant program to be administered through PDE for school districts to test and/or evaluate elements of personalized learning that are already in place. This program would provide districts with the flexibility necessary to test a variety of practices that fit with their existing strengths and priorities and expand programs as needed.

   See the Utah and Kansas examples described on pages 42-43.

2. In return for funding, grant recipients would agree to participate in program evaluation conducted by a well-respected research institution and to receive technical assistance from IUs or contracted providers. This evaluation should focus on continuing to identify promising practices producing gains in specific districts, as well as increasing the field's knowledge and understanding about what works, for whom, and under what conditions.
Long-term opportunities reflect the steps that will be necessary to move the commonwealth toward a more flexible and resilient system that takes a personalized approach to meeting the needs of the whole child. These recommendations are designed to be actionable, to align with others who are already engaged in this work nationally, and to follow along a suggested continuum for progress.

One framework advanced by KnowledgeWorks offers a three-part continuum — exploration, replication, and statewide transformation — and identifies policy goals for personalized learning that align with those phases.\(^9\)

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\(^9\) See KnowledgeWorks’ *State Policy Framework for Personalized Learning* for more information.
LONG-TERM OPPORTUNITIES

STATE-LEVEL RECOMMENDATIONS

1. Develop new standards-aligned **assessments** at the state and local levels that are:
   - Competency-based
   - Formative
   - Connected to learning progressions
   - Supportive of deeper learning

2. Offer **professional development** opportunities at the state level for teachers, administrators, and other education personnel to advance the knowledge, understanding, and practice of personalized learning.
   > See the New Hampshire Learning Initiative on page 42.

3. Develop a **state task force** to make recommendations toward the integration of data systems to facilitate coordination of community services for students served by multiple systems. Include local practitioners in this effort.

4. Create a **personalized learning hub** that could serve as a point of contact for districts as they seek to develop personalized learning strategies. Options could include:
   - Creating a position within PDE
     > Example: the Office of Personalized Learning created in South Carolina, page 44.
   - Selecting one of the IUs to serve as the lead agency
     > Example: the PaTTan system that currently exists in Pennsylvania to provide support to districts around the provision of special education services.
   - The creation of a separate nonprofit entity
     > Example: the New Hampshire Learning Initiative or the Kentucky Innovative Learning Network, pages 42-43.
   - Establishing a center at a research-based university
     > Example: the Arkansas Office of Innovation based at the University of Arkansas, page 44.
DISTRICT-LEVEL RECOMMENDATIONS

1. Create a district-wide **vision and strategy** for personalized learning that leads to the development of standards-aligned personalized learning pathways.

2. Establish locally-developed, state-approved **graduation requirements** aligned to state standards and to the district's personalized learning pathways.
   
   See South Carolina's statewide profiles of a graduate on page 44.

3. Continue to **strengthen connections** between students, parents, families, and the community through the expansion of learning hubs, establishing partnerships with out-of-school time providers, and developing protocols for outreach to families under various scenarios.

4. **Prioritize professional development** and peer learning for teachers and leaders that supports their ability to design and deliver personalized learning.
   
   - Provide technical assistance for teachers and administrators in the selection of personalized learning tools.
   - Include time for teachers to collaborate and troubleshoot issues related to implementation.

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Advances in Personalized Learning in Other States
Recognizing the promise that personalized learning has for advancing equity and whole-child learning, several states have taken steps to integrate these practices into districts through state policy.

Below are six examples that could inform Pennsylvania’s work in the future.

Kansans Can

After meetings and conversations with community members, the Kansas State Department of Education (KSDE) aimed to revitalize its traditional education system and implement aspects of individualized learning and project-based learning. The Kansans Can Redesign Project seeks to create a state system that encourages student agency in learning with the goal of increasing achievement and applicable life skills. KSDE invites its 288 school districts to apply for participation annually; currently, 72 school districts are participating in the Redesign Project. Throughout the various phases of the project, all districts will undergo redesign. To analyze the success of the Redesign Project, KSDE will measure socio-emotional outcomes of students, graduation rates, rates of continuing education, and the use of individual plans of study for each child.

New Hampshire Learning Initiative

Created in 2016, the New Hampshire Learning Initiative (NHLI) works to transition the state of New Hampshire to an innovative, competency-based system of education. The NHLI works with schools and other states to apply new education tools and practices designed to prepare students for future careers and postsecondary education, as well as recenter educational systems around students. The NHLI utilizes the Performance Assessment of Competency Education as a replacement for state standardized exams to showcase clear substantiation of learning and understanding. Through its work, the NHLI seeks to aid teachers in adjusting their curricula and approaches to teaching, with the goal of improving student success outcomes, including communication and collaboration skills.

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94 For more information about the New Hampshire Learning Initiative, please visit https://nhlearninginitiative.org/
In 2016, the Utah legislature passed legislation (Title 53F-5-5: Competency-Based Education Grants Program) that established a grant program to increase implementation of competency-based frameworks within school districts. The grant program focused on five core principles, including advancement based on mastery, differentiated support for students, development of applicable skills and knowledge, and adjusted assessment practices. Under this amendment, the Utah Competency-Based Education Framework was developed. The framework utilized a pilot program featuring 14 districts to determine successful practices for a future expansion. Under this program, education was designed to focus on students' needs and strengths. Other goals included increasing student agency in the learning process and ensuring that success was measured in accordance with demonstrated understanding and mastery. The framework uses specific indicators to determine the success of the program's implementation, including absenteeism rates, student and teacher surveys, and student proficiency. The framework also follows students to measure their future success in high school and post-secondary school as an indicator.

The Kentucky Innovative Learning Network offers a way for the state's Department of Education and school districts interested in committing to education innovation to share strategies and methods to incorporate and “transform” personalized learning in education. Through this network, the Department of Education provides districts with technical support and encourages the sharing of best practices among districts. Additionally, the network facilitates connections with other educational partners and funding sources to support the implementation of personalized learning in these districts. Participating districts meet monthly through representatives and attend events with other districts; furthermore, the districts act as additional resources for each other and participate in other Department of Education initiatives focused on personalized learning.

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Arkansas Office of Innovation

The Office of Innovation for Education in Arkansas, based out of the University of Arkansas and funded by the Arkansas Department of Education, works to collaborate with public schools, districts, and educators to support the growth of personalized learning across the state. In 2020, the Office of Innovation for Education (OIE) worked alongside 192 schools and 9,221 students. The OIE utilizes its Designing for Innovation Framework to increase student-centered education using three main attributes: transitional leadership, learner-driven education, and professional competencies. Transitional leadership includes changing school culture and implementing innovative school and district missions. Learner-driven education focuses on increasing educational equity through personalized learning and flexible learning environments. Finally, professional competencies work toward improving curriculum development to include social and emotional learning, as well as other efforts in professional development. The OIE offers assessments for schools, educators, and districts in these three domains as a starting point to increase understanding regarding each category and the areas that can be improved.

South Carolina Office for Personalized Learning

The South Carolina Department of Education has created a Framework for Personalized Learning with a mission to create an equitable and personalized state education system. The framework has four main components: student agency, learner profiles, learning pathways, and flexibility in learning. The four components aim to strengthen South Carolina students in line with the state’s Profile of a South Carolina Graduate. The profile was created to set standards and expectations of learners under the competency-based framework and encompasses the knowledge, skills, and characteristics that students gain throughout their education. The profile includes language skills and other traditional expectations, as well as creativity, communication, technological skills, and a “global perspective.” To implement this framework, the state’s Department of Education works with districts and education stakeholders, offering professional development opportunities in competency-based learning, specifically the Competency Fellows Cohort. This yearly cohort is a group of teachers and administrators working toward learning and including personalized instructional practices. Additionally, the State Board of Education has options for districts that require flexibility while working toward personalized learning. State Board of Education Regulation 43-234 encourages districts to apply to implement such a system. Regulations 43-231 and 43-232 allow schools to work toward education innovation with the work of the local board of trustees and the district at large. There are also waivers available to schools to encourage this flexibility. Finally, the Department of Education provides various resources, such as a blog, readings, and more, for schools and districts seeking to learn more about personalized learning and how to properly implement such a system.

The whole community needs to come together and think about how to collaborate to build a cradle-to-career, holistic child development and education system, which will empower our families and young people with the supports and opportunities they need in order to ensure the children’s success. We’re in a moment where success for the future in education is not going back to the status quo because that legacy system was not working all that well for far too many of our children. We now have an opportunity for transformative change because people have been forced into some of the discomfort that inevitably accompanies changes. So, we have a kind of head start on the big changes we need to make if we truly want to prepare all our children for success. We have a little momentum, and we’ve got to keep that going.

I hope that in this crisis, we wind up taking a more holistic view of our obligations as a society to children...

— Paul Reville, Francis Keppel Professor of Practice of Educational Policy and Administration, Harvard University

The COVID-19 pandemic has demonstrated how ill-prepared K-12 systems were across the country to handle disruptions to the traditional model of schooling, based on a certain number of hours of seat time within a classroom inside a school building. It has also identified bright spots — positive attributes that allowed school districts to navigate the challenges of the pandemic with greater ease.

According to researchers at the Fordham Institute, these attributes include:

1. a comprehensive awareness and understanding of student and family needs,
2. a district-wide commitment to high-quality instruction and student-centered learning,
3. the previous inclusion of technology in instructional practices, and
4. a demonstrated ability and willingness to innovate.100

The schools featured in the case studies in this report are just a few of the districts that demonstrated one or more of these attributes and helped students to thrive in spite of the challenges presented by the COVID-19 pandemic.

Personalized, competency-based learning offers a framework built on promising practices to help move the commonwealth forward into the future through:

- Frequent diagnostic assessments that are shared with families and used to make decisions about student learning in real time
- Appropriate use of technology for specialized learning
- Continued coordination with community organizations and leveraging community resources to more effectively meet whole-child needs
- A demonstrated and thorough understanding of who students are and what they bring with them to the classroom
- An allocation of resources to support well-being, reach high standards, and successfully prepare students for their preferred futures

In its 2018 report on personalized, competency-based learning, iNACOL stated, “Those students who need the most help are usually those least well-served by the traditional educational system. It is time for a system, designed for equity, that provides students help and supports tailored to their needs, capable of helping every student succeed.”101 The commonwealth has a great opportunity to redesign a system that is capable of meeting the needs of all students, and, given the momentum on this issue across Pennsylvania, the time to act is now.


Committee activities

The IOP's Education Policy Committee was reconstituted for the benefit of this project to include a balanced group of elected officials (four state representatives who all currently serve or have previously served as members of the PA House Education Committee), foundation and community leaders, and experts in education policy and practice. (A full list of committee members can be found in Appendix A.) Many committee members hold two or more key roles, as parents of students who were impacted by the crisis, former K-12 educators and superintendents, and community members. The committee framed the project through information obtained via the activities described below.

Given that the committee is largely comprised of professionals working in the education sector, this report offered an opportunity to document and capture expert observations during the crisis. Their input, provided at key points throughout the project via surveys, committee meetings and interviews, provided the framework for the recommendations developed in this white paper.

To advance this project, the IOP Education Policy Committee met formally twice: once in the early months of the shutdown and again in October 2020 after schools had begun the 2020-2021 school year. Prior to each meeting, the IOP staff administered a survey to committee members to help guide discussion and determine priorities.

The first survey, administered from May 20, 2020 through June 6, 2020, was designed to:

1) Identify immediate challenges facing schools, teachers, parents and students, as well as potential barriers that were making it difficult to address those challenges effectively

2) Identify potential policy solutions that could serve to mitigate the identified barriers

These issues fell into the following five categories:

- Technology
- Flexibility
- Meeting whole-child needs
- Competency-based learning
- Individualized/personalized learning

The committee also identified several districts that had policies and practices already in place that gave them a strong foundation for adapting to the challenges of the pandemic. Two of these districts — Avonworth and Duquesne City — are located in Western Pennsylvania and are featured in vignettes in this report, and a third vignette on Building21, a charter school in Philadelphia, is also included.

Guiding Principles

At the June 2020 committee meeting, members reviewed the survey results and established the following guiding principles for the project:

- Aim for equity and innovation
- Make it actionable
- Ground recommendations in evidence
- Identify high-value opportunities
- Learn from this crisis to prepare for the future
- Adopt a whole-child focus

In identifying equity as a part of the first guiding principle and a part of the overall goal for the project, the committee saw the disruptions of the pandemic as an opportunity for our region to reorient collective efforts toward the creation of more flexible learning environments for students but did not wish to exacerbate existing and longstanding inequities for students both within and between schools. Committee members also expressed the need for a shared understanding of educational equity and the range of systemic changes that would be needed to achieve it.
The second survey, administered from August 19, 2020 to August 30, 2020, was designed to narrow the scope of focus to a specific set of policy recommendations that would have the greatest potential to advance equity and flexibility. Through that process, the committee ranked the five categories of recommendations described above on their ability to meet the guiding principles that were established by the committee.

At the October meeting, through an analysis of the survey results and in consideration of additional research, it was concluded that focusing on policy supports for individual/personalized learning would enable the education committee to address problems and inequities laid bare by the pandemic and address policy barriers to systemic change that would enable districts to better meet student needs. Also, members expressed their intent to craft recommendations that focused primarily on state-level policy change, with the understanding that school leaders would need to be engaged in conversations around practice changes and support for policy changes going forward.

Interviews
Ongoing stakeholder interviews were conducted with individual committee members as well as external stakeholders, which included school district superintendents, parents, and representatives of organizations who are working to advance equity and flexibility in education in the region and nationally. The interviews provided an opportunity for the IOP to dig deeper into issues that were of importance to the committee or where subject-matter expertise would be particularly value-added. A full list of interviewees is provided in Appendix B.

Research activities
Other research activities conducted by the IOP included:

- a national scan to determine emergent issues related to the pandemic that had not been raised explicitly by the committee,
- an analysis of Pennsylvania’s Public School Code, existing regulations, guidance from the U.S. and Pennsylvania Departments of Education, local school board decisions, and current legislation pending in the PA General Assembly,
- observations of legislative hearings in August 2020 on issues related to the reopening of schools in the fall of 2020,
- a review of scholarly research related to personalized learning and competency-based research to determine promising practices
- a review of six other states that have taken steps to institutionalize personalized learning at the state level, and
- in-depth inquiries into over a dozen Pennsylvania districts and individual schools that demonstrated advanced or exemplary leadership in their response to the COVID-19 crisis.
Acknowledgements

The authors would like to thank first the members of the Education Policy Committee and chair Stan Thompson for their leadership in shepherding this project forward during a very challenging time in their own careers.

Second, the authors are indebted to Anne Olson, State Policy Director at KnowledgeWorks and education consultant Maria Worthen, who provided guidance and support in navigating state policy issues and provided suggestions for sample policies and state examples.

Third, the authors would like to recognize everyone at Remake Learning for continuing to serve as a partner in the region, for providing contacts, and for offering a platform for sharing and gathering information.

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