Design Principles for Schools

Putting the Science of Learning and Development Into Action

Learning Policy Institute and Turnaround for Children
in partnership with the Forum for Youth Investment
and in association with the SoLD Alliance

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Design Principles for Schools: Putting the Science of Learning and Development Into Action

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Preface: A New Purpose for Education

Imagine a world in which every child's life is a succession of positive opportunities for development—opportunities through which a child can come to know who they are and discover the wide range of possibilities for what they can become. Imagine different types of learning settings in which those kinds of opportunities are also intentionally built and optimized, regardless of where a child lives or attends school. Imagine, too, that educators can identify each child's talents, interests, and aspirations and align them with learning opportunities designed to promote them and build on them to create new competencies.

This is not the world in which we currently live, but it is one that we can now begin to create. Building on new knowledge from the science of learning and development, coupled with a commitment to advancing equity for all students, schools and community partners can bring these opportunities to bear for every child.

The need is great. Even as the United States has led the world in so many areas, it remains a country of dramatically widening inequalities, with many children living in poverty and with significant adversities of many kinds, including food and housing insecurity, exposure to increasing gun and racial violence, and lack of access to health and mental health services. During the pandemic, the dramatic inequalities in the conditions of living in America have been exposed, along with the dramatic inequalities in the conditions of learning in America.

For the past century, the U.S. education system has primarily focused on the delivery of subject matter content—especially in mathematics and English language arts—using approaches that presume a bell curve of student ability, with instruction targeted to a mythical "average student." It is a system that was not designed to unlock the potential in each and every child or to develop the whole child across the multiple domains of development. The resulting structures and practices in many schools are not adaptable to the variation in how different students learn. They do not use differentiated and personalized approaches, and they are not attuned to the development of deeper learning skills or to the habits and mindsets that support the creativity and resilience demanded in the 21st century.

In addition, the U.S. education system was not designed for equity; it was designed for inequitable access to rich learning opportunities, which has disadvantaged marginalized groups based on race, income, gender, language, and culture. Indeed, it was designed to select and sort, rather than to develop potential, and—through segregation, unequal school funding, and tracking systems—institutionalized racism and classism are baked into the design of the system itself. This system reinforces beliefs about who has potential and who is worthy of opportunity that we now know are false, harmful, and discriminatory on both scientific and moral grounds. Such beliefs risk squandering the potential of millions of students each year, and growing inequality in our society.

The COVID-19 pandemic, the related economic recession, and ongoing racialized violence have laid bare the inequities of experience and opportunity for many young people in our country. The inequities shaping and challenging our children's futures before the coronavirus, heightened by anti-Black and other forms of racial violence, have been dramatically amplified by these concurrent

and devastating events. These forces cry out for a redesign of all the systems that support our children and families and educate and prepare our youth. The situation facing our country demands that we use this disruption as an empowering stimulus for transformational societal, educational, and economic change, defined by the goals of social justice, multidimensional equity, and the opportunity for each and every young person to thrive.

It may be hard to find silver linings through so much suffering, but as recovery and reopening take shape, there will be a chance to design something very different and better for children and youth. This is the design challenge we are solving for in the Design Principles project.

The Opportunity We Face

Here is the opportunity we have today: Developmental and learning science tell an optimistic story about what all young people are capable of. There is burgeoning scientific knowledge about the biological systems that govern human life, including the systems of the human brain. Researchers who are studying the brain's structure, wiring, and metabolism are documenting the deep extent to which brain growth and life experiences are interdependent and malleable. (See "Foundational Science of Learning and Development Research" for the key articles and reports that form the basis of this work.) Because researchers know so much more about the brain and development than they did when the 20th-century U.S. education system was designed, we can now use this knowledge to design a system in which all individuals are able to take advantage of high-quality opportunities for transformative learning and development.

Foundational Science of Learning and Development Research

Three papers synthesizing this knowledge base form the basis of the design principles for schools presented here. For those seeking access to the research underlying this work, these papers are publicly available:

- Cantor, P., Osher, D., Berg, J., Steyer, L., & Rose, T. (2018). Malleability, plasticity, and individuality: How children learn and develop in context. *Applied Developmental Science*, *23*(4), 307–337. https://doi.org/10.1080/10888691.2017.1398649.
- Darling-Hammond, L., Flook, L., Cook-Harvey, C., Barron, B. J., & Osher, D. (2019). Implications for educational practice of the science of learning and development. *Applied Developmental Science*, *24*(2), 97–140. https://doi.org/10.1080/10888691.2018.1537791.
- Osher, D., Cantor, P., Berg, J., Steyer, L., & Rose, T. (2018). Drivers of human development: How relationships and context shape learning and development. *Applied Developmental Science*, *24*(1), 6–36. https://doi.org/10.1080/10888691.2017.1398650.

This playbook suggests a set of engineering principles that were developed by a group of educators, practitioners, scientists, and parents, building on the knowledge we have today and the contributions of many in the field to nurture innovations, new models, and new enabling policies. (See Appendix A for a full description of how the design principles were co-created.) At their foundation, the design principles are intended to advance the following goals for youth learning and development (see Appendix B for a more in-depth treatment of the goals and their embedded components):

- Learners can think critically and creatively to solve complex problems.
- Learners deeply understand content and can apply their knowledge beyond the classroom.
- Learners are self-aware and engage meaningfully with others.
- Learners hold a positive sense of identity, self-potential, purpose, and direction.
- Learners make healthy life choices.
- Learners are empathetic, ethical, and proactive in contributing to the welfare of their communities.

The playbook includes a set of design principles—informed by the Guiding Principles for Equitable Whole Child Design (see Figure 1.1 in the Executive Summary)—to achieve these goals, along with recommendations for evidence-based structures and practices that further these aims in k–12 learning settings. A companion playbook does the same for out-of-school community learning settings. These design principles do not suggest a single design or model, nor is that the intended outcome. The desired result is to have increasingly robust innovations, new collaborations aligned with the resources for positive growth found in children's communities and cultures, and a commitment to the redesign of our education and learning systems in both formal and informal learning settings.

Executive Summary

Emerging science tells us an optimistic story about the potential of all learners. There is burgeoning knowledge about the biological systems that govern development, including deeper understandings of brain structure and wiring and their connections to other systems and the external world. This research tells us that brain development and life experiences are interdependent and malleable—that is, the settings and conditions individuals are exposed to and immersed in affect how they grow throughout their lives.

This knowledge about the brain and development, coupled with a growing knowledge base from educational research, provide us with an opportunity to design systems in which all individuals are able to take advantage of high-quality opportunities for transformative learning and development. The situation facing our country today—sharp and growing economic inequality, ongoing racial violence, the physical and psychological toll of the pandemic—underscores our need to enable societal and educational transformations that advance social justice and the opportunity to thrive for each and every young person.

The Guiding Principles for Equitable Whole Child Design

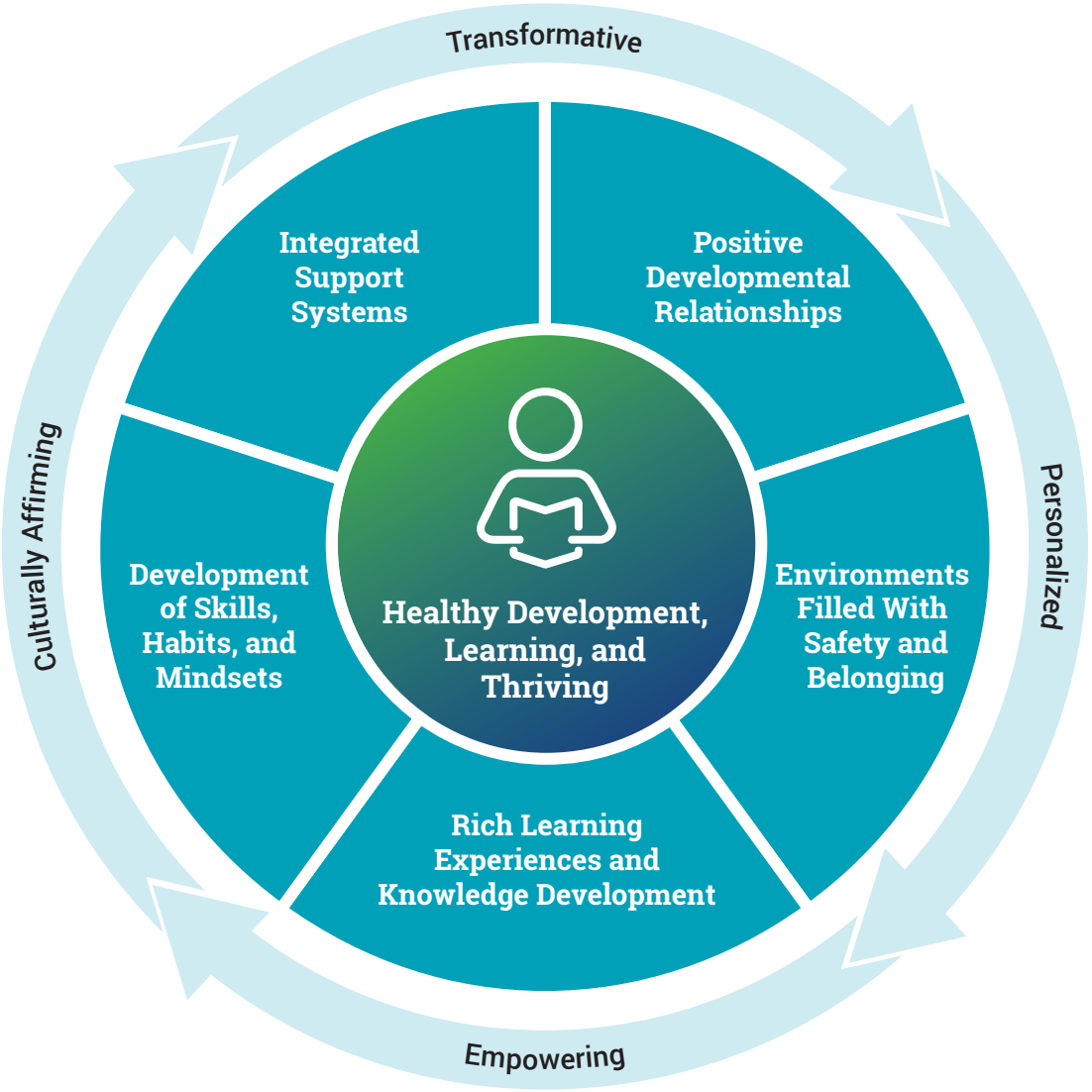
The Guiding Principles for Equitable Whole Child Design aims to seize this opportunity to advance change. The organizing framework to guide transformation of learning settings for children and adolescents is reflected in the five elements shown in Figure 1.1:

- Positive Developmental Relationships
- Environments Filled With Safety and Belonging
- Rich Learning Experiences and Knowledge Development
- Development of Skills, Habits, and Mindsets
- Integrated Support Systems

Although these elements resonate with most educators, they have not yet been widely used to develop and create learning settings, nor have they been engineered in fully integrated ways to yield healthy development, learning, and thriving. Progress has been impeded by both historical traditions and current policy built on dated assumptions about school design, accountability, assessment, and educator development. Current constraints do not support robust implementation, let alone integration of these practices. If, however, the purpose of education is the equitable, holistic development of each student, scientific knowledge from diverse fields can be used to redesign policies and practices to create settings that unleash the potential in each student.

Redesign around these core principles has implications for all levels of the ecosystem, from the classroom to the school, district, and larger macrosystems that must join together to produce an intentionally integrated, comprehensive developmental enterprise committed to equity for all students, not just some. We separate and enumerate each component individually, but we believe the unique application of these components will be to use them in reinforcing and integrated ways to truly support learner needs, interest, talents, voice, and agency. The aim is a context for development that is greater than the sum of its parts and is transformative, personalized, empowering, and culturally affirming for each student.

Figure 1.1
Guiding Principles for Equitable Whole Child Design



Below is a brief description of this organizing framework, in which we describe how each of the Guiding Principles for Equitable Whole Child Design is associated with research from developmental and learning science. We also briefly describe how each element is associated with:

- structures that create the context for changed conditions, adult practice, and student learning and experiences; and
- practices that can be used within these structures to transform the quality of relationships and experiences among educators, children, and their families to promote engaged and productive learning.

Positive developmental relationships

That relationships are important is not new knowledge to educators, families, or researchers. Relationships engage children in ways that help them define who they are, what they can become, and how and why they are important to other people. However, not all relationships are developmentally supportive. In a developmental relationship, caring and attachment are joined with adult guidance that enables children to learn skills, grow in their competence and confidence, and become more able to perform tasks on their own and take on new challenges. Children increasingly use their own agency to develop their curiosity and capacities for self-direction. Looked at this way, developmental relationships can both buffer the impact of stress and provide a pathway to motivation, self-efficacy, learning, and further growth.

A strong web of relationships between and among students, peers, families, and educators, both in the school and in the community, represents a primary process through which all members of the community can thrive. Schools can be organized to foster positive developmental relationships through structures and practices that allow for effective caring and the building of community. These include at least the following:

- **Structures that enable the development of continuous, secure relationships** and allow teachers to know children well, as well as opportunities among adults for collaboration toward shared goals. These structures include:
  - small schools and small learning communities;
  - advisory systems that create small family units within schools;
  - looping that allows educators to be with the same children for more than one year;
  - time and protocols for home visits and other outreach that connects families and educators;
  - staff collaboration time and structures; and
  - opportunities for shared decision-making.
- **Practices that allow educators to engage in trust-building and collaboration** with students, families, and each other to achieve shared practice around a developmental approach to learning and development. These practices include:
  - behaviors that communicate respect, caring, and valuing of students and families;
  - pedagogies that allow educators to develop deep knowledge about their students, their talents and interests, their families, and their cultural contexts;
  - classroom and schoolwide strategies that counteract stereotype threat through cultural affirmation and reinforcement of students' capacities; and
  - collaboration skills for building productive relationships among staff and with families.

Environments filled with safety and belonging

The contexts for development, including schools and classrooms, influence learning. This is especially important because the cues from our social and physical world determine which of our 20,000 genes will be expressed and when. Over our lifetimes, fewer than 10% of our genes actually get expressed. When settings are designed in ways that support connection, safety, and agency, a positive context for development of potential is created.

The brain is a prediction machine that loves order; it is calm when things are orderly and gets unsettled when it does not know what is coming next. Learning communities that have shared values, routines, and high expectations—that demonstrate cultural sensitivity and communicate worth—create calm and ignite the other part of the brain that loves novelty and is curious. Children are more able to learn and take risks when they feel not only physically safe with consistent routines and order, but also emotionally and identity safe, such that they and their culture are a valued part of the community they are in.

In contrast, anxiety and toxic stress are created by negative stereotypes and biases, bullying or microaggressions, unfair discipline practices, and other exclusionary or shaming practices. These are impediments to learning because they preoccupy the brain with worry and fear. Instead, co-creating norms; enabling students to take agency in their learning and contribute to the community; and having predictable, fair, and consistent routines and expectations for all community members create a strong sense of belonging.

To achieve an environment in which belonging and safety are principal features, a school can consider the following:

- **Structures that foster safety and belonging, which include:**
  - shared values and norms framed as "do's" that guide relationships (e.g., respect, responsibility, kindness) rather than "don'ts" that direct punishments (e.g., don't talk, touch, or move); these are co-developed with students and translated into expectations for each community member's actions and interactions;
  - consistent routines that support order and positive interactions (e.g., daily greetings, regular classroom meetings, shared classroom practices), building a foundation for a strong sense of community and belonging within the school;
  - restorative routines and settings that support reflection and build life skills (e.g., community circles, places where students can defuse and reflect, and processes for explicit conflict resolution); and
  - inclusive settings, including heterogeneous classrooms and socially supportive extracurriculars that are culturally affirming and communicate common expectations and opportunities.
- **Practices that build safe and caring learning communities, which include:**
  - educators' regular and skillful use of co-developed norms, routines that enable responsibility and agency, de-escalation practices when situations become tense, and management of conflict through dialogue and reparation of harm;
  - attention to signs of trauma, using a range of tools and resources to uncover and understand what children are experiencing, as well as healing-oriented practices, including mindfulness, counseling, and access to additional resources; and
  - respect for students, coupled with instruction that builds upon students' cultures, identities, and experiences alongside efforts to reduce implicit and explicit bias in the classroom and school as a whole; these practices include affirmations that establish the value of each student, cultivate diversity as a resource, and encourage asset-based celebrations of accomplishments.

Rich learning experiences and knowledge development

To engage learners in rich learning experiences that develop brain architecture as well as formal knowledge and deep understanding, educators should provide meaningful and challenging work for all students within and across core disciplines, including the arts, music, and physical education. This includes opportunities for students to develop their knowledge in ways that build on their culture, prior knowledge, and experience and help learners discover what they can do and are capable of. Students learn best when they are engaged in authentic activities and are collaboratively working and learning with peers to deepen their understanding and to transfer knowledge and skills to new contexts and problems. They will be empowered to solve these problems through formal and informal feedback from peers and adults as they engage in activities.

Because learning processes are very individual, teachers need opportunities and tools to come to know students' experiences and thinking well, and educators should have flexibility to accommodate students' distinctive pathways to learning, as well as their areas of significant talent and interest. Approaches to curriculum design and instruction should recognize that learning will happen in fits and starts, which requires flexible scaffolding and supports, differentiated strategies to reach common goals, and methods to leverage learners' strengths to address areas for growth. A school can consider the following:

- **Structures that foster rich learning experiences, which include:**
  - curriculum and program offerings that support inquiry and problem-based learning around rich, relevant tasks that are culturally connected and collaboratively pursued;
  - performance assessments and rubrics focused on higher-order thinking skills and applications of knowledge that structure the teaching, tasks, feedback, and metacognitive reflections that guide learning; and
  - tools for learning about students' experiences, interests, strengths, and readiness that can be built upon to draw connections to the curriculum and foster learning (e.g., learning surveys, student reflections, observation protocols, formative assessments, and exit tickets).
- **Practices that develop competence and confidence in learners, which include:**
  - "two-way" pedagogies that provide knowledge of students as learners and individuals in order to enable explicit connections between students' prior knowledge and cultural experiences and the content under study;
  - careful scaffolding and supports for students to undertake rich, engaging, authentic tasks, creating zones of proximal development for rich learning through active inquiry and strategic, explicit instruction;
  - recognition of strengths and skills with opportunities to continue to develop them and share them with others, developing positive academic identities;
  - cognitive supports that make tasks doable by structuring them well, reducing unnecessary cognitive load, and that use multiple modalities and tools for accessing information and expressing learning (as in Universal Design for Learning); and
  - opportunities to develop mastery and metacognitive skills, including opportunities to access resources; collaborate; practice; give and receive useful feedback; and reflect, revise, and improve, so that students can ultimately manage their own learning toward mastery of content and deeper learning skills.

Development of skills, habits, and mindsets

Neuroscience advances show that parts of the brain are cross-wired and functionally interconnected. As a result, learning is integrated: There is not a math part of the brain that is separate from the self-regulation or social skills part of the brain. For students to become engaged, effective learners, educators need to develop students' content-specific knowledge alongside their cognitive, emotional, and social skills. These skills, including executive function, growth mindset, social awareness, resilience and perseverance, metacognition, and self-direction, can and should be taught, modeled, and practiced just like traditional academic skills and should be integrated across curriculum areas and across all settings in the school. To achieve these aims, schools can incorporate the following structures and practices:

- **Structures that integrate cognitive, social, and emotional development into learning, which include:**
  - curricula and dedicated time that enable students to explicitly learn and practice valued skills, habits, and mindsets (e.g., social and emotional learning or conflict resolution curricula);
  - opportunities and routines that reinforce skills, habits, and mindsets during everyday instruction and school activities;
  - scaffolds that support executive functions like planning, organizing, implementing, and reflecting on tasks; and
  - collaboration protocols and rubrics that support interpersonal skill development in the context of subject matter classes.
- **Practices that make learning and skill development visible and supported, which include:**
  - strategies that reinforce skill, habit, and mindset development; affirm students' abilities and assets; and provide appropriate scaffolds (e.g., using growth-oriented language and practices);
  - strategies that help students describe their thinking and feelings; build self-awareness; and develop strategies for calming, self-management, and problem-solving; and
  - practices such as educator modeling, think-alouds, and metacognitive activities that make the development of cognitive, social, and emotional skills visible while conveying what is possible.

Integrated support systems

All children need support and opportunity. And all students have unique needs, interests, and assets to build upon, as well as areas of vulnerability to strengthen without stigma or shame. Thus, learning environments should be designed to include many more protective factors than they currently do, including health, mental health, and social service supports as well as opportunities to extend learning and build on interests and passions. Building comprehensive and integrated supports will tip the balance toward an environment where students feel safe, ready, and engaged.

To do this, opportunities for exploration, intervention, and growth must be plentiful, rich, and extensive to meet students where they are and help them discover their purpose and direction. Opportunities and supports nurture students' agency, help them discover what motivates them, inspire them, and help them advocate and contribute to changing suboptimal conditions they may experience.

In addition, all students will experience different needs at different times. It is therefore helpful to organize integrated supports as tiers. Universal supports (i.e., Tier 1) are those available in every classroom and include Universal Design for Learning, prioritization of relationships, fair and just discipline practices, and a culture of safety and belonging. Integrated supplemental supports (i.e., Tier 2) provide learners with additional support when needed and may include small group work with the teacher or a tutor on specific skills, or outreach from a counselor or social worker to support a current need. More individualized and intensive supports (i.e., Tier 3) are those that respond in a sensitive and timely manner to student readiness, wellness, and needs. To do so, Tier 3 interventions personalize supports and experiences in school, out of school, and with families through special education services; health or mental health services; or more intensive family assistance, including re-engaging disconnected learners.

Having comprehensive and integrated supports like these in place can allow schools to extend learning; enable safety and belonging; and address students' unique health, mental health, and social service needs. A school can consider the following:

- **Structures that incorporate universal and tiered supports, which include:**
  - assessments that help educators understand student wellness and progress and the supports students need;
  - availability of high-quality tutoring and mentoring, counseling, and student support teams;
  - additional before, during, and after-school time for expanding learning, along with summer programs or Acceleration Academies during intersessions; and
  - health, mental health, and community partnerships with social service providers, including community school models.
- **Practices that enable these structures to be effective, which include:**
  - strategies and practices that ensure collaboration, coordination, and shared developmental approaches across providers of services; and
  - approaches that are culturally competent, carefully integrated, and age appropriate, considering students holistically and with an assets-based lens.

Conclusion

Our framework for these principles is built on a theoretical foundation of how children learn and develop that is inherently optimistic and recognizes the power of educators, families, youth developers, and other practitioners from diverse disciplines to create conditions that:

- support the talents and agency of each child;
- respect the culture and assets of the community; and
- create personalized opportunities for growth.

Building better conditions for learning and development will yield the robust equity we all seek in our education systems. Today, education systems must be willing to embrace what we know about how children learn and develop. The core message from diverse sciences is clear: The range of students' academic skills and knowledge—and, ultimately, students' potential as human beings—can be significantly influenced through exposure to highly favorable conditions. These conditions include learning environments and experiences that are intentionally designed to optimize whole child development.

Positive Developmental Relationships

Student-Led Conferences at Gateway Middle School

In a 6th-grade classroom at Gateway Middle School, located on a steep hill in San Francisco, Anisha and her advisor sit next to each other across from Anisha's parents for their first student-led conference. The advisor explains that she will not be talking during the conference and that this presentation will instead be led by the student. Anisha's parents look a little surprised but are eager to hear what their daughter will share. Anisha starts by reading a letter that she's written to her parents: "Dear Mom and Dad, First, I want to thank you for coming today," and she looks quickly at her notes to make sure she's reciting the welcome letter just as she has prepared. Her parents patiently smile and nod as their daughter reads; every so often Anisha peeks up from her paper and smiles.

Launching into the heart of the conference, Anisha pops open a large three-ring binder and tells her parents what she is most proud of, what she found most challenging, and how she has grown from her work in her humanities, science, learning seminar, and art classes. Next, Anisha reflects on her contribution to the school community and on her overall goals for the quarter, saying:

> This year I have contributed to the school community by building stronger friendships, creating shared spaces with my peers, participating in class more regularly, conducting community service, and volunteering to do small classroom jobs such as passing out papers. In the beginning of the year, I didn't raise my hand to share my thoughts during class, but now I participate and share out and speak up, especially when we're doing work in small groups. I have grown so much from the start of the school year when I was really nervous to speak up.

Using sentence stems generated by her advisor to scaffold the flow of the conference, Anisha explains, "Resources that helped me feel more confident were my math teacher and my table group because they encouraged me and offered me some strategies to use, such as setting a goal to raise my hand once per class and to share ideas with my teachers before or after class even if I wasn't able to speak up publicly." And, finally, she ends with, "This goal in life and school is important because if I don't learn to participate in my own learning, I will never get over feeling nervous and I won't grow."

Anisha's parents sit across from her, beaming with pride, and politely inquire if they can now interject with questions.

This web of strong relationships is a cornerstone of the school's academic success. Gateway Public School serves a diverse group of about 800 students, most of them students of color from low-income families, in both a middle and a high school. The school was founded to serve students with disabilities in an inclusion model and continues to serve a disproportionate number of such students. About half of incoming students read below grade level when they start 6th grade. Because of its strong system of supports, the high school has a graduation rate of 98%,[1] and 96% of students have matriculated to college since the high school was founded in 1998.[2]

Source: Adapted from Cook-Harvey, C. M., Flook, L., Efland, E., & Darling-Hammond, L. (2020). *Teaching for powerful learning: Lessons from Gateway Public Schools*. Learning Policy Institute.

Overview of Positive Developmental Relationships

The student-led conference profiled in the vignette above is just one of the many ways that Gateway Middle School in San Francisco fosters close connections among students, teachers, and families as partners in the learning process. Anisha's experience and the science of learning and development converge on the essential understanding that positive developmental relationships are the active ingredient in any effective child-serving system.

Positive relationships enable children and adolescents to manage stress, ignite their brains, and fuel the connections that support the development of the complex skills and competencies necessary for learning success and engagement. Such relationships also simultaneously promote well-being, positive identity development, and students' belief in their own abilities.

Parents from all backgrounds want their children to attend schools where their children are well known, cared for, respected, and empowered to learn. Families with financial privilege often choose private school settings for their children that provide small, personal learning communities where their children will be known and where relationships are prioritized. All parents hope that their children will be able to feel safe and valued at school, and all children deserve such contexts for learning. Recent brain research suggests that parents are right: Secure relationships build healthy brains that are necessary for development and learning.

Having secure relationships at school does not just mean that children are treated kindly by adults. It also means that students are nurtured through those relationships to develop independence, competency, and agency—that they grow to become confident and self-directed learners and people. As we saw in Anisha's student-led family conference, Anisha is developing the reflective skills to understand and lead her own learning, to assess her strengths and weaknesses, and to create goals. Anisha's skills and growth mindset are cultivated by a web of positive relationships that connect her with her teacher, her parents, and her school community.

These kinds of relationships provide the avenue to learning and growth and buffer individuals' negative experiences and stress. A strong web of relationships between and among students, peers, families, and educators, both in the school and in the community, represent a primary process through which all members of the community can thrive.

Why Positive Developmental Relationships Are Important: What the Science Says

Human relationships are the essential ingredient that catalyzes healthy development and learning. Relationships that are reciprocal, attuned, culturally responsive, and trustful are a positive developmental force in the lives of children. For example, when an infant reaches out for interaction through eye contact, babble, or gesture, a parent's ability to accurately interpret and respond to their baby's cues affects the wiring of brain circuits that support skill development. These reciprocal and dynamic interactions literally shape the architecture of the developing brain and support the integration of social, affective, and cognitive circuits and processes, not only in infancy but throughout the school years and beyond. When children interact positively with teachers and peers, qualitative changes occur in their developing brains that establish pathways for lifelong learning and adaptation.

Adult relationships best support students when they are attuned and responsive to all aspects of the child's experience, including—importantly—their cultural experiences. All children need to feel that they belong and are valued in their classroom and school community. If children experience anxiety about whether they will be valued for who they are, which may accompany stereotype threats associated with students' identities (race, class, language background, immigration status, dis/ability, sexual orientation, or other marginalized status), the cognitive load this creates undermines their achievement. When educators build cultural competence—including their knowledge of and respect for students' cultural backgrounds and personal experiences—research shows that they are better able to understand the verbal and nonverbal communication of students and respond appropriately, helping all students to be respected and heard, and supporting stronger achievement.

Supportive relationships in childhood and adolescence have an important protective effect against the impacts of stress and trauma. Research has found that a stable relationship with at least one committed adult can buffer the potentially negative effects of even serious adversity. These relationships, which provide emotional security and reduce anxiety, are characterized by consistency, empathetic communications, modeling of productive social behaviors, and the ability to accurately perceive and respond to a child's needs. Two research reviews including over 400 studies on positive school climate have found that the elements of positive school climate that contribute the most to increased academic achievement were teacher–student relationships, including warmth, acceptance, and teacher support.[3]

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Relationships are multidirectional and interdependent. As a child is influenced by other people, they are also capable of changing the beliefs and actions of others as well. If a child learns how to communicate effectively, this shapes the ways others respond to them. This extends to the multiple relationships in a student's life. For instance, if a child's parents communicate with the child's teachers, this interaction may influence the child's development. When relationships are structured to be mutually reinforcing and multidirectional, like those at Gateway Middle School, positive effects on development are the outcome.

Developmental relationships allow children to grow in trust, competence, and agency. That relationships are important is not new information to educators, families, or researchers. Relationships engage children in ways that help them define who they are, what they can become, and how and why they are important to other people. However, not all relationships are developmentally supportive. In a developmental relationship, the emotional connection is joined with adult guidance that enables children to learn skills, grow in their competence and confidence, and become more able to perform tasks on their own and take on new challenges. Children increasingly use their own agency to develop their curiosity and capacities for self-direction. As developmental relationships enable the young person to grow, the balance of power shifts toward the student, as shown in the vignette with Anisha. Looked at this way, developmental relationships can both buffer the impact of stress and provide a pathway to motivation, self-efficacy, learning, and further growth.

What Can Schools Do to Foster Positive Developmental Relationships?

The science of learning and development shows that warm, caring, consistent, trustful teacher–student relationships matter for the activation of student motivation, self-efficacy, and engagement. Such relationships with nurturing and responsive educators promote positive development and successful learning. This is particularly true when teachers are explicit about their expectations and belief in students. Together, these things contribute to an enhanced school experience for the entire community, as students acquire greater social competence and increased ability and willingness to take on new challenges. School designs that enable these kinds of responsive, reciprocal relationships with caring adults provide the foundation for healthy development and the attainment of holistic goals for children. (See Appendix B for "Goals for Youth Learning and Development.")

When schools focus on strengthening relationships, they create the conditions for raising academic standards by giving students more challenging and meaningful work and, at the same time, enabling them to engage in the work productively in the context of those relationships. With scaffolding and support, students' social and emotional growth and character development can become an integral part of academic learning, and students can be empowered to become more self-directed as learners.

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Schools that have been redesigned to foster positive developmental relationships have found new organizational approaches that enable school staff, educators, students, and families to know each other well in a context of trust and collaboration. They also enable students to become active participants in their relationships and in the creation of their learning environment and experiences. These schools adopt both structures and practices that allow for effective caring and the building of community. These include at least the following:

- **Structures that enable the development of continuous, secure relationships** and allow teachers to know children well, as well as opportunities among adults for collaboration toward shared goals. These structures include:
  - small schools and small learning communities;
  - advisory systems that create small family units within schools;
  - looping that allows educators to be with the same children for more than one year;
  - time and protocols for home visits and other outreach that connects families and educators;
  - staff collaboration time and structures; and
  - opportunities for shared decision-making.

- **Practices that allow educators to engage in trust-building and collaboration** with students, families, and each other to achieve shared practice around a developmental approach to learning and development. These practices include:
  - behaviors that communicate respect, caring, and valuing of students and families;
  - pedagogies that allow educators to develop deep knowledge about their students, their talents and interests, their families, and their cultural contexts;
  - classroom and schoolwide strategies that counteract stereotype threat through cultural affirmation and reinforcement of students' capacities; and
  - collaboration skills for building productive relationships among staff and with families.

In many schools, creating strong relationships may require reimagining and restructuring key parts of the school designs inherited from an educational system put into place nearly 100 years ago. Large comprehensive schools in which teachers see 150 students a day in 45-minute periods provide little opportunity for teachers to come to know all of those students well. Many students can go unnoticed. Those experiencing challenges or trauma may have no opportunity to get help from a caring adult.

Fortunately, many schools have been redesigned to center relationships, and a number of school networks have been established that have adopted similar features, which they now help other schools to adopt. Evidence shows that these redesigned schools have stronger attendance, achievement, and graduation rates than others serving similar students.[4] (See "Where to Go for More Resources" at the end of this section). One such network with a strong record of school success is the Institute for Student Achievement, a national nonprofit organization that partners with districts to redesign high schools. Among the strategies adopted by the network schools—also common among other redesigned schools—are:

- **Small school sizes**, typically 300 to 500 students.
- **Advisors** assigned to each student for multiple years who serve as an advocate; connect with families; and hold advisory classes, like family groups, that provide academic support as well as social and emotional learning opportunities.
- **Teaching teams** in which staff work in groups to develop shared norms and practices so that a cohort of interdisciplinary teachers (English, math, science, and social studies) teaches the same students. In some schools these teachers loop with the students to the next grade.
- **Explicit relationship building** leveraged through advisories and teaching teams.
- **Attention to student voice and needs** through student engagement in research and student-initiated projects on topics of concern.
- **Student leadership** in advisories and clubs.
- **Outreach to families** that includes frequent communication with parents in multiple ways.

Another school network that combines these types of relationship-building practices, EL Education (formerly Expeditionary Learning), offers a curriculum focused on inquiry learning in English language arts, combined with social and emotional learning and character development. Schools implementing the EL Education model across the nation, typically serving students of color in low-income communities, outpace district and state averages on state assessments and graduation rates.[5]

There is no single way to achieve these goals, but district and school leaders can consider a variety of structures and practices that can enable, rather than undermine, positive relationships.

Below, we describe the structures and practices schools can implement to design schools that foster positive developmental relationships, organized into three areas: (1) personalizing relationships with students, (2) supporting relationships among staff, and (3) building relationships with families.

Personalizing Relationships With Students

> "[The teachers] treat us like people with emotions. We have real relationships with our teachers. We want to do our work because we care about our teachers."
>
> —New Tech High School Student[6]

Continuity, consistency, and trust are key principles when designing structures and practices to build relationships with students. Continuity is especially important for children who have minimal continuity outside of school. Discontinuity in relationships is, in itself, stressful and can be counterproductive—especially for young people who have experienced disruption in their home or community environments. In addition, it is important to create time and space for supportive relationships that are accessible to students and sustainable by adults. Structures found to be effective in this regard include:

- looping,
- advisory systems,
- block scheduling,
- longer grade spans, and
- small school size and/or small learning communities.

Looping

Looping teachers with the same students for more than one year enables continuity in relationships and stronger achievement gains.

Looping can occur when an elementary teacher works with the same students in 4th and 5th grade, for example, or when a secondary teacher has the same students for 9th- and 10th-grade English language arts. When teachers stay with the same students for more than one year through looping, they can come to know the students and families well, uncover how students learn, build trust, and gain time for productive instruction, since effective instructional strategies that address children's individual needs can carry over from one year to the next. Furthermore, the reduced anxiety, understanding of the classroom context, and heightened trust enable more productive learning. The strong relationships and deep knowledge of student learning supported by these longer-term relationships between adults and children can substantially improve achievement, especially for lower-achieving students,[7] and can also boost student and teacher attendance while lowering disciplinary incidents and suspensions, grade retention, and special education referrals.[8]

Teachers in such settings report a heightened sense of efficacy, while parents report feeling more respected and more comfortable reaching out to the school for assistance. As a teacher at Benjamin Franklin Intermediate School in Daly City, CA, noted:

> Through looping, I've had my students in math and science class for 2 years now. What strikes me most is the progress of students who often get lost in the system—the shy ones who now ask questions because they trust me, the unmotivated ones who now come in for help because they know I'll be supportive, and the defiant ones who now recognize that I'm an ally who cares for them. These are the kids who need adults' support the most, but it takes them the longest to develop relationships. Looping gives us the time to make these relationships happen.[9]

While looping has been most often used in elementary schools, it is also found in some high schools. In the Internationals Network, a successful school model for newcomers who are new English learners, an interdisciplinary team of four core content area teachers stays with a group of 80–100 students for 2 years, with a counselor attached to the cohort.[10] These personalized supports are especially important in the Internationals schools, where as many as one third of students arrive as unaccompanied minors and struggle to manage housing, food, health care, and other basic supports, as well as learning the language and customs of a new country (as illustrated in this vignette of Oakland International High School).

Advisory systems

> "Our advisors are really cool; they make sure we do the work. If they see that I am trying to get it done, they help me prioritize. They don't let people fail."
>
> —June Jordan School for Equity Student[11]

Advisory systems can ensure that each student has an in-school "family" and a strong relationship with a caring adult who is an advocate, supporter, and link to a student's family.

In effective advisory systems, each teacher advises and serves as an advocate for a small group of students (usually 15–20), often over 2 to 4 years. Teachers facilitate an advisory class that meets regularly to support academic progress, teach social and emotional skills and strategies, and create a community of students who support one another. In a distributed counseling function, advisors support students on academic and nonacademic issues that arise and serve as the point person with other faculty teaching the same student. The advisor functions as a bridge between student, school, and home so that students are provided the supports they need in a coherent way that allows them to navigate school in a productive and positive manner. Many studies finding positive effects of small schools or learning communities note the importance of advisories in enabling these effects.[12]

For advisories to be effective, they should occur all or most days of the week and be supported with curriculum (for example, for social and emotional learning) and/or other shared protocols for advising. In secondary schools, they should replace a course in the teacher's normal course load, rather than being an add-on, and should be supported with professional development. When possible, English learners (ELs) should be paired with advisory staff who speak their native language. It is also important that advisors be well versed in any special needs of their advisees, including individualized education plans (IEPs), and be in regular communication with case managers.

Advisory Models

The EL Education advisory model, called "Crew," is cited by students and teachers as a primary reason for the EL network's academic and college-readiness success. At the elementary level, Crew meets in a circle at the beginning and end of every day and can also meet to address issues during the day. At the secondary level, Crew meets every day for a full period, supporting academic habits and mindsets; college readiness and the college application process; social and emotional health; and courageous conversations about difficult topics such as discrimination due to race, culture, gender identity, sexual orientation, and body type. It also engages in team building and service work.

Phoenix Union High School District in Arizona has pioneered an "Every Student Every Day" approach to advising, in which every student in the district's 21 high schools is "connected to a caring adult who monitors the teen's progress, attendance, and social-emotional well-being."[13] Prior to the COVID-19 pandemic, students connected with advisors daily, and when brick-and-mortar schooling closed in March 2020, the district recruited administrators and school board members into the advisory program to be able to reach out to all students at home for wellness check calls. District advisors documented their calls and either provided resources or connected families to other programs or community organizations for assistance meeting their needs.

Block scheduling

Block scheduling creates more time for teachers to collaborate and build relationships with students.

Block scheduling is the practice of having fewer, longer class periods in a given day to reduce teachers' overall pupil load and lengthen time for instruction. For example, instead of six 45-minute class periods, schools might schedule only three 90-minute classes each day. Each teacher sees half as many students, and students see fewer teachers. This smaller pupil load allows teachers to provide more attention to each student and to engage in more in-depth teaching practices. Block scheduling has been found to support improved behavior and achievement for students, including higher grades and higher rates of course completions, especially when courses continue for a full year and teachers use the longer class periods to implement teaching strategies that support inquiry, help students obtain directed practice, and personalize instruction. When a school adopts block scheduling for part or most of the day, it is important that teachers be given ample time and professional learning support for transforming their pedagogies. Longer lessons are effective when teachers make good use of the time by bringing in active challenges, problem-solving, hands-on work, group work, presentations of thinking and learning, and synthesis of learning. During a transition to block scheduling, it is helpful to have teachers share their learning and best practices with each other as they find good ways to engage students with more complex thinking and work.

Longer grade spans

Longer grade spans allow for closer, longer-term relationships and smoother school transitions.

Schools with longer grade spans (e.g., k–8 or 6–12) are also found to be more effective in supporting student outcomes than schools with shorter grade spans, as they help to establish and build upon

close relationships among and between school staff, students, and families. Many studies have found that school transitions have a negative effect on student achievement: In particular, the transition to middle school at 5th or 6th grade has been found to decrease achievement in reading and math and, moreover, sharply increase the odds of dropping out.[14] These results are consistent across multiple states, as well as in urban, suburban, and rural areas. This may be in part the result of the transition itself and in part the result of the departmentalized structures that many middle schools adopt, which create larger pupil loads for teachers and more disruption for students. At a vulnerable time in young adolescence, when children should be developing greater competence and confidence to support their growing autonomy, they may flounder when placed into an environment that reduces their opportunities for attachment and introduces them to the system of tracking. The tracking system is known to cause teachers to draw comparisons between students and to cause students to draw comparisons with their peers, comparisons that include negative attributions about competence and intelligence.

Small school size and/or small learning communities

Small school size or small learning communities within larger schools allow students to be well known and allow educators to create a community within the school with shared norms and practices.

Reviews of research about school size have consistently found that students benefit when they are in smaller settings where they can be well known, and these effects are strongest for students with the greatest economic and academic needs.[15] These settings include smaller schools (typically 300–500 students) as well as small learning communities created within large school buildings, where staff and students work together in smaller units that function as close-knit communities (see "Designing for Relationships: Houses and Cohorts," below). More intimate settings allow educators to more easily develop shared norms and practices and to create a community within the school in which caring is a product of individuals knowing each other in multiple ways. Such environments also allow more students to be engaged in a variety of extracurricular activities and to take on leadership opportunities, which promotes greater confidence and agency.[16] Multiple studies have found these features are most effective when combined with other elements that personalize learning—such as small classes, advisories, and block scheduling—so that relationships are a principle embedded in the school culture.[17]

Designing for Relationships: Houses and Cohorts

The house system was a traditional feature of schools in England in the 19th century, when students were divided into subunits called "houses" to which teachers were also assigned. (Think of Gryffindor, Hufflepuff, Ravenclaw, and Slytherin, the four houses at Harry Potter's Hogwarts.) American public schools have reintroduced the house system, a smaller learning community within a larger building, as a way to help students feel more connected and to develop a sense of belonging. Some schools that serve students who have had their education interrupted due to homelessness, mobility, or family circumstances also divide their students into smaller learning communities to provide them with a consistent set of experiences and relationships as well as the opportunity to personalize learning.

Vista High School, a large comprehensive high school serving the needs of a diverse small suburban and rural community north of San Diego, CA, has redesigned to combine block scheduling with a house system. The freshman class was broken into six houses of 100 to 130 students who shared a set of four teachers to cover core subjects and one special education teacher. Each house was located in a dedicated area of the Vista High School campus so teachers and students could have space to build stronger positive relationships (including relationships between students, between students and teachers, and among teachers within the house structure). Each team defined how spaces in and around their classroom and house could be used to meet the learning needs of students and reimagined how the grouping of students and grouping of teachers within that space and time could positively impact student learning. Despite the high proportion of socioeconomically disadvantaged students attending Vista (over 70%), the school's graduation rates exceed the state average.[18]

Source: Adapted from Darling-Hammond, L., Schachner, A., & Edgerton, A. K. (with Badrinarayan, A., Cardichon, J., Cookson, P. W., Jr., Griffith, M., Klevan, S., Maier, A., Martinez, M., Melnick, H., Truong, N., & Wojcikiewicz, S.). (2020). *Restarting and reinventing school: Learning in the time of COVID and beyond*. Learning Policy Institute.

An example of a high school that successfully underwent a multipronged redesign to convert from a traditional high school to one centered on relationships is Hillsdale High School. Hillsdale High School, now known as a high-performing district secondary school in the San Francisco Bay Area, serves a student body that is more ethnically and economically diverse than the neighborhood in which it is situated, comprising predominantly students of color and more than 40% that speak a language other than English at home.[19] Before undertaking a 3-year conversion process in 2002, Hillsdale was a traditional, large, comprehensive public high school that was both less diverse and less academically successful than it is now as a relationship-centered school. Now, Hillsdale uses looping, cohorts, advisories, and interdisciplinary team structures within a house system to help achieve personalization within a student body of nearly 1,500 students whose academic performance has strongly improved.[20] Below, we summarize Hillsdale's process of redesigning for relationships.

Redesigning for Relationships: Hillsdale High School

In summer 2005, Hillsdale entered the final year of a 3-year process of converting from a single comprehensive high school serving approximately 1,200 students to three relatively autonomous, vertically aligned small learning communities (SLCs) serving 400 students each. Each SLC—Florence, Kyoto, and Marrakech, named after medieval centers of learning consistent with Hillsdale's knight mascot—has a Junior Institute for the 9th and 10th grades and a Senior Institute for 11th and 12th grades.

Hillsdale phased in one grade level per year, beginning with the freshman class in 2003–04. All freshman and sophomore students in the Junior Institute (except for beginning English speakers and special education students in day classes) are currently taking their four academic core classes (English, social studies, math, and science) from a team of teachers who share a collaboration period in addition to each teacher's individual preparation period. Most special education and English language development teachers also serve their students within the house system. (Newcomers and special education students in day classes experience other personalized structures.) All teachers in the three houses also have an advisory group of 25 students with whom they meet regularly and for whom they serve as the main point of contact and advocate. Math, English, and social studies

teachers loop with students in their classes and advisory for 2 years. Hillsdale reduced class sizes, added the collaboration period, and hired additional teachers through a reallocation of existing staff, additional district support, and temporary funding through a federal SLC grant.

In the Senior Institute, which was implemented during the 2005–06 school year, all juniors take their core classes (math, physics, social science, and English) with teams of four teachers who have a shared common collaboration period in addition to their individual preparation periods. In each house, the four core teachers also serve as advisors to the junior cohort and teach an advisory period focused on portfolio work and college preparation. Advisors, English and social studies teachers, and, to the degree possible and appropriate, math and science teachers loop with students into their senior year. Although electives are outside of the house structure, physical education and health teachers are attached to or affiliated with houses to help them connect and plan with core teachers. Hillsdale implemented a seven-period day in 2005–06, though students generally still take six periods of classes, in order to better facilitate access to electives. The goal is for the four core academic teachers to have autonomy over their time within a daily 4-hour block.

Hillsdale has used its structural changes to foster teacher collaboration across subject areas, chip away at student tracking, and use performance-based assessments to help all students achieve at high levels. With a long-term process of change, Hillsdale has made significant changes to the school's structure and allocation of resources to deliver on its vision of a more personalized, equitable, and rigorous education for all its students. These changes have yielded positive and powerful outcomes. The school has eliminated low-track science classes and enrolls all students in 9th-grade biology and 10th-grade chemistry. As a result, 3 years into the redesign, 100% of African American and Latino/a 9th-grade students were enrolled in biology, compared to only 18% in 2002–03. Thus, compared to other schools in the district, Hillsdale was enrolling a far greater percentage of African American and Latino/a students in biology and chemistry than other schools in the district. In addition, Hillsdale's performance on District Common Assessments was equivalent to that of schools that enrolled only high-track students in these courses. (See this video for more insight into Hillsdale's redesign process.)

Now, thanks to the school's redesign, Hillsdale Principal Jeff Gilbert says, "You know every family, and you know every student. You stop dealing with them in these sorts of large, abstract cohorts, and allow for much more individualized responses."[21]

Source: Adapted from School Redesign Network. (2005). *Windows in Conversion case study: Hillsdale High School*. School Redesign Network at Stanford University.

Practices to strengthen relationships between educators and students

Personalizing structures that enable students to be known are most effective when they are joined with practices that build positive school culture, community, and trust.

Structures that enable students to be known and valued by each other and by adults provide a foundation for healthy academic and personal growth. But structures alone are not sufficient. They must be joined to a schoolwide commitment to build a healthy learning community in which adults and children value and model positive behavior, exhibiting habits like respect, responsibility, courage, compassion, and integrity (see "Environments Filled With Safety and Belonging" for more on building a caring school community).

Practices that build a positive school culture and community. The deliberate development of classroom learning communities that create and strengthen relationships is critical. These practices may include classroom meetings, check-ins at the beginning of class to see how students are doing, and celebrations of community events and accomplishments, as well as routines for how to work in groups productively, engage in respectful discussions, and resolve conflicts. They may also include regular student–teacher conferences as well as student–teacher–family meetings. In collaborative communities, members feel personally connected to one another and committed to each other's growth and learning. Teachers can learn about the strengths and needs of students as well as their families' funds of knowledge through regular check-ins, conferencing, journaling, close observation of students and their work, and connections to parents as partners (see "Building Relationships With Families" later in this section). These practices can foster trust and alignment among students, families, and staff, as described in the following sections.

Teachers can learn about the strengths and needs of students as well as their families' funds of knowledge through regular check-ins, conferencing, journaling, close observation of students and their work, and connections to parents as partners.

Practices that build trust. Turnaround for Children has built a continuum of strategies for building trust that focuses on several interrelated dimensions of relationship building:

- *The quality of interactions*: All students predictably experience interactions with adults that are marked by interest, inquiry, support, affirmation, and empathy. Schoolwide prioritization of relationship building results in frequent reflection, collaboration, and continuous improvement around the quality of adult–student interactions.
- *Personalized understandings and reflections*: Adults get to know all students as whole individuals by actively listening, asking questions, and providing opportunities for students to speak about their interests, experiences, and beliefs, recognizing the culturally grounded experiences of each student as a foundation on which to build knowledge and connections within and beyond the classroom.
- *Choice and voice*: Meaningful opportunities for student choice and voice are regularly and seamlessly integrated into classroom routines, structures, and practices (e.g., providing a choice of how to practice a skill or demonstrate mastery, providing input on a classroom policy). All students are given increasing levels of responsibility and autonomy as they grow, as adults support them through both successes and setbacks. Students lead conversations and projects, give feedback to adults, and co-construct classroom and school culture.

Practices that seek to ensure all students thrive. Particularly in large secondary schools, it is possible for students to "hide" while they struggle with academic or emotional issues. Even in elementary schools and small secondary schools, it can be challenging to track the struggles that students are experiencing internally or in their home lives. To address this, schools use a range of strategies to catch students before things unravel. Pairing older students with younger students (e.g., 5th-graders with 1st-graders; high school seniors with freshmen) as reading buddies or mentors can build relationships that are positive for both. In some schools, students who are

struggling with emotional or behavioral challenges are connected with a caring adult—a counselor, social worker, nurse, or aide, or even a school custodian or administrator—to spend time, not as a disciplinary consequence but as a therapeutic experience (i.e., getting some love and attention).

Many schools also create ways to review their progress regularly to determine strategies for supporting students who may be struggling with academics, attendance, or behavior—or who may have experienced a traumatic event. When students are flagged for high concern, the first step is to determine who on the staff knows that student well (e.g., their home life, health, interests) and then to learn what is needed to wrap around that student with supports. Often, teaching teams meet for child reviews to support problem-solving and to figure out the best outreach and resources for individual needs.

Supporting Relationships Among Staff

A positive and supportive staff culture is the foundation of a school climate that enables positive developmental relationships. Student culture follows staff culture. If staff are not respectful, compassionate, and inclusive with each other, if they do not model a growth mindset in their learning and a commitment to equity and social justice, how can we expect students to display these habits? Recent research makes clear that mindset interventions with students are effective when those students have teachers who model productive mindsets; when they do not, the positive effects of the intervention tend to evaporate.[22] Furthermore, research on teacher effectiveness shows that teachers become more effective over time in collegial settings where they have opportunities to collaborate with and learn from one another.[23]

This means that school leaders need to prioritize structures and practices that build a healthy professional learning community for staff, enabling staff to strengthen relationships that support each other in their work and to continue their professional and personal growth. It also requires ongoing efforts to be sure everyone on the staff feels respected, heard, and valued.

Schools in the United States often need new structures that provide opportunities for staff to develop collective expertise about students and a shared developmental approach. Expertise in teaching—as in many other fields—comes from a process of sharing, attempting new ideas, reflecting on practice, and developing new approaches. However, U.S. school structures were built on the notion that teachers are only working when they are in front of students. Thus, many American teachers spend their Sunday nights sitting at their kitchen tables, all by themselves, creating their lessons for the week. This model has resulted in U.S. teachers teaching more hours per week and year than any other teachers in the industrialized world and having less time for individual and collective planning. International surveys show that the average teacher around the world has, on average, 8 hours more per week for planning and collaboration than the average teacher in the United States.[24]

Structures that help cultivate positive relationships among school staff include:

- structures and time for staff collaboration within and across disciplines, such as grade-level or subject-matter teams;
- dedicated time and structures for professional learning and decision-making; and
- meetings and events to build positive school culture.

These structures are enabled to be effective by the way in which they are used and implemented in practice, as described in greater detail below.

Collaborative planning

> "There is structured time every Wednesday [for teachers] to meet as a family and just talk. When I think back to my previous teaching experience, we didn't have this collaborative time, and so it was kind of like every teacher was in their own little world. There's just this expectation that teachers are communicating. And that time builds culture, and I think it has really helped me to be able to know what is going on."
>
> —City Arts and Technology High School Teacher[25]

Collaboration time for teachers enables them to develop a collective perspective, create a more coherent curriculum, address problems of practice, and ensure that students do not fall through the cracks.

Relationship-centered schools commit time and resources to collaborative planning and asset-based professional development. This supports both more thoughtful and effective teaching within the classroom and greater coherence across courses and grade levels, as well as relational trust among staff members. These practices have been found to retain teachers in schools, contributing to staff stability, and to increase teaching effectiveness and gains in student achievement.[26]

A growing number of schools have been redesigned to find time for **teacher collaboration**. At successful schools, teachers work together to develop the curriculum, develop lessons that will work with their students, look at student work, evaluate their lessons, and troubleshoot for future classes. Collaboration time can also be used for teachers to talk together about individual students to figure out how to best support them.

Finding Time for Collaboration

A wide range of strategies is available for building staff collaboration opportunities. At Sherman Oaks Community School in San Jose, CA, for example, an innovative schedule allows elementary school teachers to meet for collaborative planning and professional development for 90 minutes a day over lunch. Instead of having students takes electives such as art, music, and physical education at various times during the day, as is the case at most elementary schools, Sherman Oaks contracts with community-based agencies such as local museums to provide these classes all at the same time, in the middle of the school day, combined with lunch and recess. This provides a long period of time during the workday (not at the end, when teachers are generally tired) for teachers to work together to develop their skills and figure out how best to support individual students.

Vanguard High School is one of many redesigned schools in New York City that has found opportunities for teachers to regularly plan together, both within content areas and in grade-level teams. It has reallocated its resources to reduce class size and provide teachers with significant time for collaborative planning and professional development by: (1) hiring more teachers and fewer out-of-classroom personnel (and having all staff teach in some capacity); (2) creating a schedule in which the core subjects all occur at the same time during the day; and (3) hiring part-time teachers to offer elective courses while the core teaching staff are doing collaborative work.

Source: Adapted from Darling-Hammond, L., Alexander, M., & Price, D. (2002). *10 features of good small schools: Redesigning high schools, what matters most*. School Redesign Network at Stanford University.

One important strategy that supports collaboration and student-centered practices in secondary schools is **interdisciplinary teaming**, through which a group of teachers shares a group of students and has common planning time. This structure allows teachers to share their knowledge about students in planning curriculum to meet student needs, while creating more continuity in practices and norms, which supports students emotionally and cognitively. As one synthesis of research notes:

> Effective interdisciplinary teaming reduces the levels of developmental hazard in educational settings by creating contexts that are experientially more navigable, coherent, and predictable for students. Interdisciplinary teaming can also create enhanced capacity in schools for transformed instruction through enabling the coordination and integration of the work of teachers with each other, including in instruction, and as ongoing sources of professional development and support for each other.[27]

Some middle and high schools combine courses in **interdisciplinary team block schedules** in which teachers from two or more courses share a common group of students—such as a combined math and science course taught by one teacher alongside a combined English language arts and social studies course (often called humanities) taught by another teacher. Often these courses are co-planned with other math or science or humanities teachers so that all teachers get the benefits of each other's disciplinary expertise, even as they are teaching smaller groups of students for longer blocks of time individually. Team block schedules can further reduce the total number of individuals with whom students and teachers interact while also fostering greater collaboration among teachers to coordinate curriculum.

Professional learning and decision-making

Opportunities for shared learning and decision-making across the school—including distributed leadership, staff meetings, events, rituals, and retreats—foster staff relationships and school coherence.

Many schools have allocated a block of time for the purposes of shared learning and decision-making once a week toward the end of a workday—usually about 2 hours—by banking instructional time during the week (i.e., adding 30 minutes of instructional time on other days). Students may be involved in internships or in clubs or extracurriculars offered by community members and organizations during that time.

Involving staff in decision-making about school practices and professional development fosters both commitment to the decisions that are made and coherence in practices across the school. There is evidence that teacher participation in school decision-making can lead to improved academic achievement for students.[28] Engagement in decision-making at the school level models the collaborative work that effective teachers expect from their students (and, indeed, the democratic process of the larger society) and enables small schools to make significant improvements in their practice with the full endorsement and engagement of all members of the school community.[29]

Distributed leadership is also important: In addition to teachers serving as interdisciplinary leaders, grade-team leaders, or department heads, staff can lead the committees that interview and hire staff, plan and implement professional development, and manage other functions that cut across teaching teams. These smaller groups of staff work on specific issues, bringing them back to

the whole staff when policy decisions must be made. This shared school governance maintains the coherence and unity of purpose in the work of the school. It can also help eliminate and prevent actions based upon misinformation about the school's values, policies, or practices. At some schools, committees and work groups have changing memberships to increase representation and involvement, as well as to create opportunities for people to develop shared perspectives and learn from one another. As one elementary teacher at San Francisco Community School described:

> There is a level of trust that gets built over time because everything is with other teachers.... The leadership model means we are always together. It's a lot of shared responsibility, and it is really supportive.[30]

Staff meetings, events, rituals, and retreats can also be used to build positive staff culture. Teaching students and managing schools can be relentless work, discouraging at times, and being part of a staff community that is positive and supportive can be a key to staff resilience and efficacy. If all staff gatherings are dedicated to getting the business of school done, with no attention to the social and emotional health of staff members and their professional and personal growth, meetings can end up wearing staff down more than supporting them. Meetings, events, rituals, and retreats can be used to build positive staff spirit—learning together, eating together, celebrating together, and sharing their personal lives. Staff development work that is respectful and meaningful for staff can also play that role.

In addition, it is important to create safe and productive contexts for staff to grapple together with a range of issues, including whether staff from all races, cultures, and backgrounds feel respected and heard in the school community. That work may include courageous conversations, perhaps facilitated by external experts, to grapple with how racism, sexism, and stereotypes affect staff members and staff culture (see "Environments Filled With Safety and Belonging" for more on creating identity-safe learning experiences).

Practices that build productive relationships among staff

Collaborative learning among staff can be used to build both shared teaching expertise and relational skills.

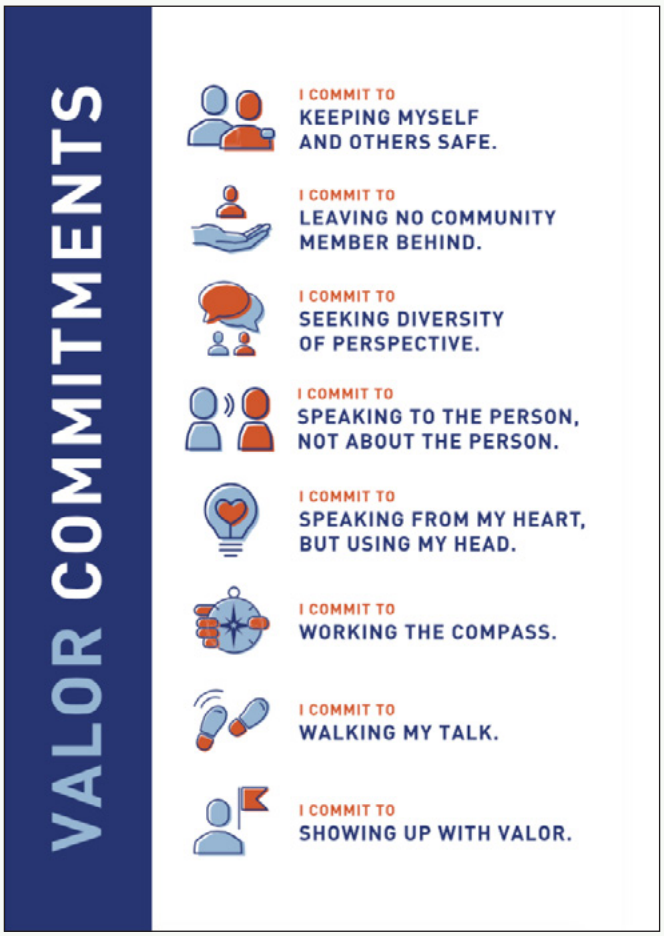
Structures to foster relationships can only be effective if the adults in the school have the knowledge and relational skills to realize the potential of those structures for building positive developmental relationships. Collaborative practices for developing these skills are asset based, avoid blame, and provide explicit skills and tools.

Collaborative learning to build shared teaching expertise enables all teachers to serve students well. In particular, this can be critically important for relationships with English learners and students with disabilities, areas of expertise that are everyone's shared responsibility. In the Internationals Network of schools, one mantra is that "everyone is a language teacher" and must have opportunities to support English learners' language development regardless of the subject area. Using a team approach to adult professional learning, teachers who have not been well prepared to support English learners collaboratively develop the expertise to meet the needs of students, mirroring the collaborative project-based learning approach that is used in the classroom with students.

Collaborative learning to build relational skills not only enables teachers to adjust their pedagogy to help students learn, but also provides opportunities for all school staff to reflect on and embody the school's vision and goals to create a stronger culture among adults on behalf of children and families.

Building Relationship Skills Among Adults at Valor Academies

Valor Collegiate Academies—two public schools on one campus in Nashville, TN, that serve grades 5 through 8—hold as their mission "to empower our diverse community to live inspired, purposeful lives." The schools' mission is further articulated through the Valor Commitments that students and staff are expected to make. The schools' leaders recognize that in order for the Valor Commitments to have an impact and become more than just nice words on the wall, staff need to be formally supported to develop fluency in relationship skills and know-how to live out the commitments of the mission. A key forum for building staff capacity for relationship work is through Valor's summer "base camp" trainings. The trainings focus on two dimensions of this work: (1) proactive relationship work to take responsibility, check things, and offer support; and (2) responsive relationship work to repair relationships when one or both people in a relationship experience a sense of hurt, disconnection, or damaged trust. Professional learning includes reflections, guided questions, and scenarios to "name it, see it, script it, and do it." Staff also progress through self-directed, competency-based social and emotional professional learning focused on the individual, relationships, and community throughout the year (referred to as "Badge Work"). Valor has also offered Compass Camps to provide professional learning on Valor's Compass Model to other educators from around the country.



Building Relationships With Families

Family engagement provides opportunities for deeper knowledge of children and greater alignment between home and school. Building strong relationships between the school and the family increases academic outcomes for students across all grade levels. Schools can cultivate such partnerships by developing structures that support school–family relations as part of the core approach to education. These structures can include:

- tools for outreach and regular communication to actively engage families as partners;
- student–teacher–family conferences that are scheduled around families' availability; and
- dedicated time and resources for home visits (virtual or in person).

The practices and strategies that can be used to fulfill the promise of these structures to successfully build meaningful relationships with families are described below.

Tools for outreach and regular communication with families

> "You call, email, text, whatever method they give you to get in contact with them, and the teachers use it. They check it. They answer it. That's my personal experience. I have not contacted any of my son's teachers or principal without an immediate answer, and that's pretty sweet."
>
> —City Arts and Technology High School Parent[31]

Tools for outreach and positive, regular communication with families can actively engage families as partners, including student–teacher–family conferences and home visits.

Schools that have successfully engaged parents and guardians have moved beyond traditional approaches, which often exclude families that are working long hours, are unable to get to the school easily at inflexible hours, or do not speak English as a native language. Among the tools that are used successfully by many schools are:

- Regular, positive communication with families about what the school or classroom is doing and how a child is doing through regular postings on the school website in multiple languages, as well as phone calls, emails, and text messages, translated into home languages whenever possible.
- Face-to-face meetings online as well as in person and, to the extent possible, at times matched to parent or guardian availability. Choosing times thoughtfully and providing babysitting for in-person meetings can increase family participation. Many schools have also learned that their shift to online communications with families through online town hall meetings, posted videos, and one-on-one parent conferences have solved transportation and child care problems and sharply increased family participation during the pandemic.
- Sending books and other materials home for reading, math, science, art, or other activities. This can enable families to support children in their learning (e.g., shared book reading with specific strategies and tips; math games to play at home; how to use walks in the neighborhood or trips to the grocery store for learning).

Periodic **student–teacher–family conferences**, scheduled around families' availability, engage families in their student's learning while creating student agency and ownership over their own learning.

Several innovations on traditional parent–teacher conferences can greatly improve their ability to engage families and support learning:

- holding them more frequently (e.g., two or three times a year) at times that family members can attend (which requires rearranging teachers' time and finding compensation for teachers);
- using student-led conferences at which young people are active facilitators and participants in teacher–family discussions; and
- using them as opportunities to learn from family members and plan together for children's goals, rather than communicating judgments about how children are doing.

Such meetings are designed to help teachers learn from parents about their children, review student progress and set goals, and provide an opportunity for parents to see and hear in their child's own words what they are learning. As this section's opening vignette, "Student-Led Conferences at Gateway Middle School," illustrates, when student-led conferences are held midway through the school year, they allow students to formally share their cumulative work across the semester with their family members and teachers. Such conferences help students build important skills for meaningful learning, including agency and self-advocacy, while also encouraging self-reflection and metacognition (see "Development of Skills, Habits, and Mindsets" for more on promoting such skills).

Home visits can proactively build relationships with families throughout the year. Home visits, conducted in person or virtually, allow for proactive, intentional engagement with families and enable teachers and families to learn about one another with the aim of developing a true partnership to benefit students. Parent–teacher home visits have been found to be a particularly effective strategy for engaging families, informing teachers, and combating implicit bias, particularly where staff experiences are not rooted in the same community and cultural backgrounds as their students.[32] Home visits enable teachers or staff members to:

- proactively establish trusting relationships with families;
- learn about the parents' aspirations and insights about their children;
- communicate information (such as school schedules, ways of working, academic approaches, and health and safety protocols); and
- allow for students to be connected to additional supports or resources in order to be successful and learn.

Home visits and other family communications are most effective when they are conducted not just at the beginning of the school year but more than once during the year, such as in conjunction with key milestones or transition periods (e.g., between terms or before or after a long holiday break). (See "Where to Go for More Resources" at the end of this section for additional resources for home visits.)

Practices to build productive relationships with families

Diverse families are more successfully engaged as partners with valued expertise when schools embrace shared power and responsibility.

There is no single strategy or silver bullet, but several successful means for engaging parents and increasing achievement have been found when teachers and school staff work together with families as partners to develop common strategies for working with children, seeking parents' advice and knowledge as well as working together through the logic of specific approaches. Helping parents learn how to read with their children and how to ask about and check in on students' homework or projects can be helpful, even if parents do not have the knowledge or language background to offer specific help on these activities. Students can be the readers and information providers, knowing that their family members care about their progress.

Importantly, schools that succeed in engaging families from diverse backgrounds embrace a philosophy of partnership in which **power and responsibility are shared**. It is important to recognize that in some communities in which trust has been violated, relationships must be rebuilt through a proactive, authentic process that includes extensive listening and concrete demonstrations of respect indicating that educators are trustworthy.

In some communities in which trust has been violated, relationships must be rebuilt through a proactive, authentic process that includes extensive listening and concrete demonstrations of respect indicating that educators are trustworthy.

As articulated by the Dual Capacity-Building Framework, once the essential conditions of family–school partnerships are in place, in order to build and sustain trusting and effective relationships between educators and families, both educators and family members need support to build and enhance their capacity in their capabilities (skills and knowledge), connections, confidence, and cognition (see Figure 2.1). As described below in the "Comer School Development Program," this program is one approach to building this mutual capacity.

Figure 2.1
The Dual Capacity-Building Framework for Family-School Partnerships

Source: Version 2. Adapted from Mapp, K. L., & Kuttner, P. J. (2013). *Partners in education: A dual capacity-building framework for family-school partnerships.* SEDL. https://www.dualcapacity.org.

Comer School Development Program: Building Mutual Capacity for Collaborative Learning Around Development and Relationships

Collaborative and shared professional learning is a cornerstone of the Comer School Development Program, which has been implemented in more than 1,000 schools in 26 states in the United States and in England, Ireland, South Africa, and Trinidad and Tobago. The Comer School Development Program framework helps to redesign school operations based on guiding principles that promote respect for all members of the school community and a developmental perspective on the work that is done with students, among adults, and for the growth of the school as a whole. The Comer Process underscores the importance of all members of the school community working and learning together in a focused and authentic way—from paraprofessionals, cafeteria staff, janitors, bus drivers, and parents to teachers and principals. No one is incidental or peripheral, and all participate in professional learning together. All staff and parents are provided with training around child development and around a set of processes for developing the school community. These include no-fault problem-solving, consensus decision-making, and collaboration. These guiding principles are used in the work of three key teams: the school planning and management team, the student and staff support team, and the parent team.

Source: Darling-Hammond, L., Cook-Harvey, C. M., Flook, L., Gardner, M., & Melnick, H. (2018). *With the whole child in mind: Insights from the Comer School Development Program*. ASCD.

One powerful practice for building relationships and breaking down barriers between schools and families is the **community walk**. During community walks, students lead teachers (and potentially other school staff) through their communities. Oakland International High School, a community school in Oakland, CA, that primarily serves newly arrived immigrants from over 30 different countries, has been doing community walks for several years and builds them into the professional development calendar each fall. Prior to the walks, the principal and community school manager prepare teachers by reviewing the community walk itineraries and facilitate reading circles to learn more about the specific immigrant communities they will be visiting (see "Breaking Down Barriers Between Schools and Families: Community Walks at Oakland International High School").

Breaking Down Barriers Between Schools and Families: Community Walks at Oakland International High School

Standing at a busy intersection in an industrial part of town, Juan,* a senior at Oakland International High School (OIHS), discusses what it is like to work as a day laborer: how to get picked out from the crowd for jobs, how to avoid getting cheated, and how scary it is to operate heavy machinery. Juan worked as a day laborer for a year after arriving in the United States before enrolling in high school. He still goes to look for work at the *parada*, the corner where day laborers gather to be hired, on days he is not in school or when making the rent is tight.

The parada is part of OIHS's annual community walks. One year, students and families led seven different all-day walks through different neighborhoods in the city. Because the school serves newly arrived immigrant and refugee youth from around the world (more than 35 countries are represented), learning about students' lives and the communities they live in is essential for educators and staff.

Lauren Markham, OIHS Community School Program Manager, describes the walks as

> professional development sessions [that] educate teachers about students' backgrounds, challenges, community and cultural assets, and the educational concerns of OIHS's diverse students and families. They also serve to immerse teachers in the home environments of their students and give students and family members the opportunity to serve as leaders, inverting roles such that our teachers become the students, and our students and families become the teachers.

One of the community walk options focused on the Guatemalan community, a sizable student population at the school. For the first hour, educators and staff on the walk gathered to discuss intentions and goals for the day before the students and families joined in. After the introduction, four students led a session in which they had the room of 15 or so participants read and discuss a one-page excerpt from Rigoberta Menchú's book about Guatemala's civil war (1960–96). They shared information about the different indigenous groups in Guatemala and which ones they belong to and showed on a map the regions where they are from. The students selected three short videos to show more about their home country: one about teen pregnancy (one student talked about her sister having to drop out of school back home after getting pregnant), another about political reforms, and a third with scenes from different regions of the country. Each student also talked a bit about their family and migration story.

Next, everyone loaded into cars and headed to the parada, where Juan explained to the group what it is like to look for work. They then entered a Mam (indigenous-language) church for the Guatemalan immigrant community where the father of Amalia, one of the four leaders of the walk, is a pastor. He discussed how the church welcomes newly arrived immigrants and organizes donations to send back to parishioners' home villages. He also explained the history of the church and the Guatemalan community in this part of Oakland.

Everyone then headed to a local restaurant, where several other students and their families joined staff to eat and get to know one another better. After lunch, the group headed back to the high school to debrief and share reflections from the day. One of the teachers mentioned that this was her third OIHS community walk and that it is one of her favorite parts of the year, saying, "It's really good for us to know [about our students' lives]."

Most schools do not have as diverse a student population as OIHS does, but great diversity still exists among families and neighborhoods with students of similar racial and ethnic backgrounds, and there is often a knowledge gap about students' social and cultural realities. Any school can engage in community walks through neighborhoods, meet with local community leaders, and provide forums for families to share their insights and concerns outside of the traditional parent–teacher conference format.

Source: Adapted from Bajaj, M. (2016). *Community walks: A day of learning for schools*. Learning for Justice.

Summary

The development and implementation of these kinds of structures and practices has been ongoing for more than 40 years in many schools across the country that have already redesigned their work. Currently, national and local networks such as Big Picture, the Boston Center for Collaborative Education, EL Education, Envision Education, the Internationals Network, Institute for Student Achievement, the Middle College National Consortium, New Tech, and others are made up of schools in which developmental relationships are a central organizational feature (noted in "Where to Go for More Resources," below).

All children have the potential to thrive, and all children are vulnerable to the challenges they encounter in their experiences and contexts. In communities, in homes, and in schools, relationships characterized by sensitivity; attunement; consistency; trustworthiness; and social, emotional, and cognitive stimulation provide the protection as well as the scaffolds through which children grow as students and as whole human beings.

As illustrated throughout this section, positive developmental relationships are an essential organizing principle for equitable and empowering whole child education. When students and teachers have close, caring relationships, students feel more comfortable taking risks on behalf of learning and stretching to do things they have never done before. They will have a safe space in which to express themselves honestly and make sense and meaning of the things they are learning and experiencing, whether those are supportive or difficult.

Beyond individual teacher–student relationships, a strong web of relationships between and among students, peers, families, and educators, both in the school and in the community, can provide the opportunities to build, and in some cases rebuild, essential trust and create the collective will to enable equitable experiences, opportunities, and outcomes for each and every child.

Where to Go for More Resources

Personalizing relationships with students

- How Learning Happens (Edutopia): This video series illustrates strategies that enact the science of learning and development in schools and other learning settings. It includes several video series on various topics, such as fostering positive relationships, cultivating a belonging mindset, developing foundational skills and academic confidence, establishing positive conditions for learning, and learning beyond the school day.
- Insights From Networks Video Feature (Learning Policy Institute): In these videos, school and district educators and network representatives share their insights on the strategies and practices to support designing schools to be student- and relationship-centered.
- Classroom Looping: What It Is and Why Schools Should Consider It (Mimio Educator): This short blog post from 2016 discusses the benefits of looping, a practice in which students stay with the same teacher for multiple years.
- Advisors for All (Stand for Children Leadership Center): This how-to guide is based on the pioneering "Every Student Every Day" advising approach of Phoenix Union High School District in Arizona, where every student in the district's 21 high schools is connected to a caring adult who monitors their progress, attendance, and social and emotional well-being.
- The Advisory Guide: Designing and Implementing Effective Advisory Programs in Secondary Schools (Engaging Schools): This guide is intended to help secondary educators design and implement an advisory program tailored to their school's needs and goals.
- Five Tips for Teaching Advisory Classes at Your School (*Greater Good Magazine*): This 2017 article discusses the importance of advisory periods for relationship building as well as how to structure them into meaningful learning opportunities.
- Planning to Implement the Townhall and Mind & Body Components of Class Meeting/Advisory (Turnaround for Children): This toolkit outlines how a school might leverage a structure like class meetings or advisories to address students' self-regulation and build developmental relationships.
- Big Picture Learning: Schools within the Big Picture Learning network develop advisories of 15 students each, among other personalized structures, to strengthen relationships.
- Institute for Student Achievement: The Institute for Student Achievement assists with whole-school reform efforts around the country using seven evidence-based principles.
- The Internationals Network: The Internationals Network helps schools in seven different states meet the needs of multilingual learners, focusing on recent immigrants and sharing best practices while influencing English learner policy.
- New Tech Network: This network supports deeper learning across more than 50 schools at all grade levels nationwide and boasts high college persistence rates through its project-based learning approach.
- EL Education: This network supports academic, social and emotional, and character learning across more than 150 schools, as well as school districts that serve over

500,000 students, and offers a range of free and open educational resources (e.g., curriculum, videos, documents, books, and student work models).

Supporting relationships among staff

- Positive School Relationships (Greater Good in Education): This website compiles information on practices for fostering positive peer relationships, teacher–student relationships, staff relationships, and family and community relationships.
- *We Are Crew: A Teamwork Approach to School Culture* (EL Education): This book is accompanied by a suite of freely available companion resources, including an online toolkit, a collection of nearly 40 videos, and professional development packets, to support the construction of a culture in which all members of the school community support one another and the structures that go along with that, such as morning meetings and advisories.
- Finding Time for Collaboration (ASCD): This resource compiles 15 examples of creative ways that schools throughout the country have made or found time for shared reflection and collaboration among teachers.
- Finding Time for Collaborative Planning (ERS): This resource highlights six strategies for finding sufficient time for collaboration.
- *It's About Time: Organizing Schools for Teacher Planning and Learning* (Stanford Center for Opportunity Policy in Education): This report details the benefits and challenges of creating time and capacity for teacher collaboration and shared learning, along with how Hillsdale High School redesigned its master schedule to facilitate the school's collective mission and goals to support collaboration and relationships.
- Toolkit: Connected Professional Learning for Teachers (ERS): This toolkit covers strategic practices, how to organize resources, and where to get started to shift school systems to engage teachers in effective connected professional learning.
- Valor Collegiate Academies (The Learning Accelerator): Valor Collegiate Academies partnered with The Learning Accelerator to share resources about Valor's relationship-centered human development school model, Compass, including details of the social and emotional learning and growth activities in which staff participate.

Building relationships with families

- *Preventing a Lost School Year: The Crucial Importance of Motivating Students & Engaging Families* (Stand for Children): This guide identifies essentials for motivating and supporting students and for creating strong partnerships with families, including advisors for all, staff teaming, and virtual home visits, accompanied by tools and resources.
- The Dual Capacity-Building Framework for Family-School Partnerships (Karen L. Mapp, Eyal Bergman, and the Institute for Educational Leadership): The Dual Capacity-Building Framework for Family-School Partnerships (Version 2) was designed to help districts and schools chart a path toward effective family engagement efforts.

- Family-School Partnerships (Collaborative for Academic, Social, and Emotional Learning): This webpage provides a list of resources for starting, supporting, and strengthening family–school partnerships, from accessible blogs and videos to interviews with veteran researchers.
- Parent Teacher Home Visits Toolbox of Best Practices (Parent Teacher Home Visits): This webpage compiles resources for educators, families, and communities to help implement home visit programs, including tools for getting started, training, and outreach.
- Virtual Home Visits: Building Essential Relationships (Stand for Children): This website includes a guide and an app designed to make virtual home visits easier.
- Making Families Feel Welcome (Greater Good Science Center): This brief reflection activity for school staff lists methods for making students' families feel valued and respected.

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For more information on the research supporting the science and pedagogical practices discussed in this section, please see these foundational articles and reports:

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Environments Filled With Safety and Belonging

Developing a Safe and Caring Learning Community: El Puente Academy for Peace and Justice

El Puente Academy for Peace and Justice was founded in New York City in 1993 by a neighborhood social justice organization working with the school system to turn around failure for students in the Southside neighborhood of Brooklyn—a community that was then one of the most violent in the city. By 2003, El Puente was recognized as one of the New York City Department of Education's "Schools of Excellence," and it continues to receive an A grade on the department's official report card for its strong outcomes for students. The school's 4-year, college-preparatory curriculum "promotes academic and intellectual mastery as well as holistic leadership development through a culturally relevant, standards-based curriculum that integrates community development projects."

Developing community within and beyond the school is central to the school's mission and is strengthened through several structures. All students belong to an advisory, which meets twice a week and focuses on life and relationships. Advisories engage in activities and games that build community as well as the serious business of analyzing relationships and their impact on students' lives. For example, facilitators walk students through the creation of a relationship map. In the process of creating and working through their map, students begin to see which relationships add value to their lives and which might not. As one of the facilitators explained, students need to have silence, space, and no distractions because, "We're really digging deep." The activity is followed by a circle discussion, in which students share what they feel comfortable sharing. While advisory groups tend to be mixed gender, the school also has an all-girls advisory that focuses on topics that affect young women in particular, such as self-esteem, body image, drug abuse, emotional needs, and the use of language (e.g., how they talk to each other, the experience of code switching).

In addition to advisories, town hall meetings provide a gathering space for faculty and students, either all together or by advisory or grade level, to voice their concerns about existing practices and issues and make recommendations for constructive change. As such, these meetings demonstrate the relationship between empowerment and community change and exemplify social responsibility and community engagement by staff and students alike. Advisors help students prepare for these meetings in advance during their advisories, encouraging students to discuss issues they have with teachers, classes, or peers and to think about how to present such issues respectfully and constructively.

Advisors inform students about the presentation procedures, such as one mic (i.e., one speaker at a time). Students then write their talking points in advance, a practice that enables them to examine and reflect on their thoughts and feelings, as well as find ways to publicly express them that will be productive for themselves and the community. Assistant Principal Waleska Velez recounted one case in which students were able to express their objection to peers' pejorative language about gay individuals. In order to ensure that all students have voice at a town hall meeting, students might be asked to record their issues on chart paper or use a strategy such as pass-the-ball to include everyone in the dialogue. Because town halls require students to navigate the relationship between their self-interest and their community's needs, they provide opportunities for students to learn about the dialectic between the individual and common good and to exercise their skills as participants in this dialogue.

Source: Adapted from Ancess, J., & Rogers, B. (2015). *Social emotional learning and social justice learning at El Puente Academy for Peace and Justice*. Stanford Center for Opportunity Policy in Education.

Overview of Environments Filled With Safety and Belonging

The vignette above illustrates how El Puente Academy prioritizes time and space in the master schedule for students and staff to come together regularly in advisory classes, town hall meetings, and other settings to foster students' sense of belonging, ownership, and agency in the school. This type of environment is essential for student learning and development; it both buffers students from stress and adversity and provides safety and consistency, so that students can take risks, explore new experiences, and develop their identities. The culture staff and students build together has far-reaching effects because they "own it" as a community.

The environment of a school sets the tone through features of the physical environment, as well as how time and space are used and how relationships and experiences are created.

The environment of a school sets the tone through features of the physical environment, as well as how time and space are used and how relationships and experiences are created. This context sends messages about the value placed on the students and staff who work together in the school. What is important or unimportant, what is rewarded or sanctioned, who is powerful or powerless, and who is viewed as trustworthy or untrustworthy are all communicated by the environment. Broken or functional classroom furniture, current or outdated technology, and sufficient or limited instructional supplies communicate that those attending the school and those working in the school are important or unimportant, worth investing in or not. Access to and use of texts and instructional materials that acknowledge and reflect students' backgrounds, culture, and interests send a message about the degree of student acceptance and belonging, the legitimacy of their cultures, and the importance of student voice in the school community. And an emphasis on restoring relationships rather than punishing missteps sends a message about whether students are viewed as worthy of trust and belong to the school community.

An environment can be rich in protective factors or contain significant risks to both children and staff. A positive learning environment (also referred to as a positive school climate) supports students' growth across all domains of development—physical, psychological, cognitive, social, and emotional—while it reduces stress and anxiety that create biological impediments to learning. Such an environment takes a "whole child" approach to education, seeking to address the distinctive strengths, needs, and interests of students as they engage in learning. Educational settings that provide developmentally rich relationships and experiences, like El Puente Academy, can buffer the effects of stress or trauma, promote resilience, and foster healthy development and engagement in learning.

Why Environments Filled With Safety and Belonging Are Important: What the Science Says

The brain is a prediction machine that loves order: It is calm when things are orderly and gets anxious when things are chaotic or threatening. The brain wants to know what is going to happen next. We are constantly making predictions, unconsciously and at every moment of the day; positive, consistent routines allow our brains to predict what is coming next, which reduces the cognitive load needed to process new information. This new information fuels the learning process

and the brain's ability to be productive. When the brain knows what is coming next, it can plan for what it is going to do in response. However, if the environment is chaotic and unpredictable, the brain is less able to focus, concentrate, and remember. Environments designed with shared values, norms, and routines create calm, consistent, safe settings, which in turn, promote productivity, curiosity, and exploration.

Our environments influence the expression of our genes. Each of us has about 20,000 genes in our genome, yet in our lifetime, fewer than 10% of our genes will get expressed. Gene expression happens through a biological process called epigenetic adaptation, in which the environments, experiences, and relationships in our lives determine which genes are expressed. Thus, the life cycle of a child is shaped by the contexts he or she experiences and is not predetermined in a genetic program.

Children's ability to learn and take risks is enhanced when they feel emotionally and psychologically safe; it is undermined when they feel threatened. The internal resources that children bring to learning—including prior knowledge and experience, integrated neural (social, emotional, and cognitive) processes, motivation, and metacognitive skills—are affected by the environments they experience. When children encounter trust, caring, and positive relationships with adults and peers, they can draw on these resources for learning. On the other hand, when children experience significant adversity or trauma, both their brains and their bodies are affected through the biological mechanisms of stress. This stress can become toxic when threats are constant. The surge of cortisol and adrenaline that is part of the stress response triggers hypervigilance and anxiety, reducing working memory and focus. Unless other supportive relationships and contexts are available, this process can affect the developing neural architecture that is critical for learning.

What Can Schools Do to Foster Environments Filled With Safety and Belonging?

> "I've rarely met a student who couldn't rise to the occasion, and if they weren't rising to the occasion, it was probably because they needed extra support."
>
> —Impact Academy of Arts and Technology Teacher[1]

A positive school context and community in which adults and students are dedicated to a shared vision of holistic student success is a core feature of a successful educational experience. Cultivating a supportive school environment that instills safety and belonging involves:

- building a safe and caring learning community, with consistent routines that allow students to be well known and well supported;
- developing restorative practices that are trauma-informed and healing-oriented; and
- fostering culturally responsive and inclusive learning experiences through which all students feel valued.

Whether consciously or not, a district's or school's policies and practices reflect current and older assumptions that have created customs and procedures over time, which sometimes

have contradictory influences on the environment over time as well. For a school to achieve an environment in which belonging and safety are principal features, a good first step is to engage members of the school community to assess the assumptions reflected in current policies and practices to identify what changes are needed. (See, for example, this Climate Connections Toolkit and implementation rubric.) District and school leaders may ask: What are the behaviors we want to see members of our community enact? How do we support people to learn to behave in those desired ways? What is the evidence that current policies and practices produce the desired behaviors? This information can provide grist for the design of structures and practices that support safety and belonging in the school environment:

- **Structures that foster safety and belonging include:**
  - shared values and norms framed as "do's" that guide relationships (e.g., respect, responsibility, kindness) rather than "don'ts" that direct punishments (e.g., don't talk, touch, or move); these are co-developed with students and translated into expectations for each community member's actions and interactions;
  - consistent routines that support order and positive interactions (e.g., daily greetings, regular classroom meetings, shared classroom practices), building a foundation for a strong sense of community and belonging within the school;
  - restorative routines and settings that support reflection and build life skills (e.g., community circles, places where students can defuse and reflect, and processes for explicit conflict resolution); and
  - inclusive settings, including heterogeneous classrooms and socially supportive extracurriculars that are culturally affirming and communicate common expectations and opportunities.
- **Practices that build safe and caring learning communities include:**
  - educators' regular and skillful use of co-developed norms, routines that enable responsibility and agency, de-escalation practices when situations become tense, and management of conflict through dialogue and reparation of harm;
  - attention to signs of trauma, using a range of tools and resources to uncover and understand what children are experiencing, as well as healing-oriented practices, including mindfulness, counseling, and access to additional resources; and
  - respect for students, coupled with instruction that builds upon students' cultures, identities, and experiences alongside efforts to reduce implicit and explicit bias in the classroom and school as a whole; these practices include affirmations that establish the value of each student, cultivate diversity as a resource, and encourage asset-based celebrations of accomplishments.

In order to design supportive environments filled with safety and belonging, some practices that many schools have inherited may need to evolve toward others that are more effective toward that end goal (see Table 3.1).

Table 3.1
Transforming School Environments to Be Filled With Safety and Belonging

Transforming from a school environment in which ...	Toward a school environment in which ...
individual teacher discipline practices vary from class to class, communicating different expectations for relationships	shared norms and values create consistency and positive experiences for students
the focus is on moving individual students through academic curriculum only	the focus is on community building as a foundation for shared social and academic work
tracking systems convey differential expectations of students by race, class, language background, or disability	heterogeneous classrooms with strong community norms and supports convey common expectations
governance is by rules and punishments	communities are built on shared responsibility that is explicitly taught and nurtured
exclusionary discipline pushes students out of class and school	restorative practices enable amends and attach students more closely to the community

Building a Safe and Caring Learning Community

The foundations of a safe and caring learning community are:

- shared values and norms that are co-developed as part of a proactive, positive approach to classroom management; and
- consistent routines that include consistent approaches to developing positive relationships across the school and dedicated time for regular community meetings within and beyond classrooms.

These structures are a critical foundation, but what will make them fully successful and bring them fully to life depends on the way in which they are used, modeled, and implemented in practice, as described in greater detail below.

Shared values and norms

Shared values and norms co-developed by students with teachers are part of a proactive, positive classroom management approach that builds community.

Co-developing shared values and norms involves a proactive approach to classroom management as something that is done *with* students and not *to* them. School leaders and educators can design environments that are caring and purposeful by including students as active participants in classroom management and conflict resolution, and by organizing classroom structures around communal responsibility, rather than compliance and punishment. (See, for example, Turnaround for Children's Continuum of Practice on Expectations, Norms and Routines.)

For example, students can be engaged to help create their classrooms' norms or community agreements—often displayed in a classroom constitution that is posted so that it can be a reminder and a reference point. Students can also take ownership of dozens of activities in the classroom in roles such as materials manager or as a contributor to bulletin boards, classroom activities, or special events. This ensures that all students have voice and membership in the classroom design, norms, and management and allows them to be responsible and contributing members of the community.

Teachers and students together create common agreements for how to behave in various situations, and they discuss and practice how to handle different situations so that students can interact respectfully, take turns, voice their needs and thoughts appropriately, and solve problems that occur. As community members, teachers and peers play an active role in supporting their classmates in learning how to regulate their behavior, and teachers help scaffold children's development toward self-regulation by providing them with a repertoire of words and strategies to use to manage different situations.

A well-researched example of a developmentally grounded, schoolwide approach to classroom management that involves the co-development of shared norms and values with students is the Consistency Management and Cooperative Discipline approach. (See "The Consistency Management and Cooperative Discipline Approach" below.)

The Consistency Management and Cooperative Discipline Approach

The Consistency Management and Cooperative Discipline approach builds shared responsibility for learning and classroom organization between teachers and students. The teacher works with students to create a consistent learning environment by co-constructing a cooperative plan for classroom rules, procedures, use of time, and academic learning that governs the classroom. Students become "citizens" of the classroom as they create a constitution and take responsibility for dozens of activities in the classroom that teachers might otherwise do themselves. All students are given the opportunity to become leaders in the classroom, with job responsibilities for some 50 tasks that teachers usually take upon themselves. As students learn citizenship skills and are provided multiple opportunities for leadership, they increase their self-discipline skills.

All adults in the school learn to work with children in consistent ways with staff development for faculty and principals. Home and community involvement is also encouraged by inviting community organizations and leaders into the classroom and inviting parents to participate in workshops on how to apply the Consistency Management and Cooperative Discipline approach at home.

In a set of evaluations in urban public schools, researchers found increases in student and teacher attendance; a reduction in discipline referrals; and improvements in classroom climate, time to learn, and long-term student achievement.

Sources: Adapted from Freiberg, H. J., Huzinec, C., & Templeton, S. M. (2009). Classroom management—A pathway to student achievement. *Elementary School Journal*, *110*(1), 64–80; Freiberg, H. J., & Brophy, J. E. (Eds.). (1999). *Beyond Behaviorism: Changing the Classroom Management Paradigm*. Allyn and Bacon.

For these norms to be fully expressed in the classroom and the school, they should be integrated as part of instruction for students and professional learning for adults, just as any skill is taught. Members of the school community should be able to explain why the norm is important and what it looks like in practice and to offer intentional opportunities to practice and give feedback as to how living out the norm in practice is going. (Learn more about how Valor College Academies does this in "Positive Developmental Relationships.")

By explicitly teaching the interrelated set of cognitive, social, and emotional competencies that help people cope with their emotions while they learn, develop, and maintain mutually supportive relationships, educators can ensure that students and staff alike have the tools to produce a developmentally healthy environment for the entire community. In the process, adults and students learn to recognize and manage their emotions, access help when they need it, and learn how to solve problems and resolve conflicts together, all of which serves to make schools safer and more nurturing for everyone. (See "Development of Skills, Habits, and Mindsets" for more on supporting the development of these skills.)

In the process, adults and students learn to recognize and manage their emotions, access help when they need it, and learn how to solve problems and resolve conflicts together, all of which serves to make schools safer and more nurturing for everyone.

Consistent routines

Consistent routines create order, including dedicating time to regular community meetings.

Implementing consistent routines for relationships and work habits across classrooms and settings helps students know what is expected of them, reducing stress and empowering them to have greater ownership and responsibility. Putting these predictable patterns in place also allows teachers and staff to focus more energy on positive interactions and meaningful instruction. By allowing predictability, such routines reduce cognitive load so that they increase both adults' and children's mental capacity for problem-solving and learning. Having common routines and procedures is equally important for times when students are outside of classrooms—in the hallway, on the playground, in the cafeteria—and when they are in transitions, such as at the beginning of the day, at mealtimes, and at the end of the day.

Creating a Safe and Supportive Environment at Hendley Elementary School

The evolution of Hendley Elementary School, a District of Columbia public school located in Ward 8, provides an example of how improved learning conditions can lead to a more positive student experience. Principal Dr. Sundai Riggins knew that her school faced challenges with behavioral disruptions to learning and students' peer-to-peer interactions. She decided to adopt a whole child approach: focusing on creating the foundational conditions necessary for students to build stronger relationships with their teachers and develop key social, emotional, and cognitive skills.

First, the school community focused on creating a safe, supportive environment that would provide the space to build relationships and engage in learning. Educators worked to modify classroom practices and routines to develop norms for their hallways, cafeteria, and playground. School leaders and staff worked with Turnaround for Children to design and implement plans that fostered shared leadership and ownership for schoolwide core values. Through coaching, peer support, and reflection on data, educators developed skills and practices for the co-regulation of student behavior and the capacity to model self-regulation practices.

Educators implemented clear rules, enforced them consistently, and took care to use reinforcing language to de-escalate behavior. With persistence, teachers, parents, and students all noticed a difference—teacher–student relationships had improved. As classroom behavioral disruptions decreased and common areas became more orderly, data showed positive changes in student experience as well. Between the spring of 2016 and 2019, CLASS4 scores measuring classroom organization and emotional support rose to exceed the national average in all metrics.

Next, the school focused on enhancing healthy peer-to-peer relationships to help improve emotional regulation. In partnership with Turnaround for Children, school staff created weekly grade-level meetings with all the students in upper grades. These guided community circles involved close collaboration between school administration, student support, and academic teams fostering the kind of holistic integration that is foundational to whole child design. The community circles allowed students to gather in small groups to reflect on what was happening in their lives, build community through play, engage with new ideas, and practice their social and emotional skill building. Over time, through trusting relationships students felt safe enough to share their feelings, interests, worries, excitements, fears, and achievements in this supportive community.

The results of the school's intentional efforts to create a safe, supportive community slowly became evident. In a neighborhood that has experienced frequent community violence, student surveys showed an increase in the number of children who perceived their school as a place of safety. These significant improvements in school culture, climate, community relationships, and more are a testament to Hendley's continuing commitment to the tenets of whole child design. This continues to be one of the main goals of Turnaround for Children's work: helping educators look at their schools through a whole child lens and working in partnership with them to take action toward the change they seek.

Source: Vignette provided by Turnaround for Children.

A particularly effective strategy that supports community building is to establish consistent routines by **dedicating time in the day for regular community meetings**. In elementary schools these may take the form of classroom meetings that start the day or reunite students after lunch or recess. In secondary schools, these meetings may take place as community circles in advisory classes or, periodically, in content classes. Community meetings can help build a caring and collaborative environment in which students have a sense of belonging, voice, and agency over their own learning and behavior. When implemented with intentionality, such meetings offer a respectful setting for students to reflect on, reveal, and problem-solve issues that make them feel vulnerable and to build empathy among peers. Because this setting supports a sense of acceptance and equilibrium, it can contribute to greater engagement in students' learning and the enactment of interpersonal skills for successful group work in their classes.

Community meetings can help build a caring and collaborative environment in which students have a sense of belonging, voice, and agency over their own learning and behavior.

Daily Dialogue Circles at Glenview Elementary

At Glenview Elementary in Oakland, CA, community meetings take the form of dialogue circles that are part of the school's larger restorative justice approach. Every teacher uses daily dialogue circles as a way to check in with students, settle disputes, involve students in activities, support classroom management, and build community. This designated time provides space to bring students together to engage with each other and their teacher.

Teacher Edwina Smith uses dialogue circles in her classroom to prepare students to engage in academic instruction. As Smith describes, circles provide important opportunities "to have each student share and be heard in the classroom."

Every day, Smith begins her classroom circle with a mindfulness activity so that students have an opportunity to get centered and ready for learning. After this activity, they participate in a check-in activity where students rank on a scale of 1 to 5 how ready they are to learn and discuss why they may be feeling that way. She begins by sharing her number and then asks students to share how they are feeling. One student shared, "I'm a 5 because I can't wait for spirit week." Another said, "I'm a 1 because my head hurts from Sunday."

During these activities, Smith uses strategies to manage the discussion. For example, students take turns addressing their classmates by using a talking piece that indicates who has the floor. At the beginning of the year, students also get to contribute to the discussion by coming up with topics that they think should be taken up by the class. Dialogue circles are also used to resolve conflicts that arise throughout the day. In one instance, children came together to discuss an issue that occurred during recess. This took place in a smaller circle of students who were trying to resolve the conflict. The teacher listened to a student as she explained the issue and then engaged the other students to respond and discuss a way forward.

Source: Adapted from Edutopia. (2014). *Using dialogue circles to support classroom management* [Video].

At the high school level, Social Justice Humanitas (a public high school in Los Angeles, CA) uses councils as a component of advisory classes to build community and create space for the practice of "listening and speaking from the heart." During councils, students and teachers sit together in a circle and take turns sharing the positive and difficult things happening in their lives.

Daily classroom-based community meetings can be paired with additional community meetings that bring students and staff together across classrooms or grades. For instance, at Valor Collegiate Academies in Nashville, TN, middle school students and staff participate in weekly meetings, called Valor Circles. Circles are single-gender groupings of about 20 students led by a mentor teacher. Circles incorporate mindfulness exercises and opportunities to share about and work on interpersonal issues. This brief video illustrates the Valor Circles in practice.

Similarly, Harvey Milk Civil Rights Academy, a public elementary school in San Francisco, CA, uses a schoolwide program called "Families." The Families program builds relational trust and emotional support networks between students and adults to help students feel included in the lunchroom, on the playground, and in school in general. Once a month for an hour on Fridays, students participate in a cross-grade, multifaceted curriculum that includes storytelling, public speaking, and exploration of students' heritage. Building on the principle that it is important that all students be well known by the adults in the school, Families gives teachers and students alike the opportunity to build relationships with students from every grade level. "It is how they learn to play across the yard," Principal Sande Leigh said. One teacher added, "I have seen [students] since they were little bitty kid[s]."[2] Families gives teachers a chance to get to know students that they did not teach every day, and students get to know a new teacher and students from other grade levels. (See *Elementary Schools for Equity* for a detailed case study of Harvey Milk Academy and three other elementary schools.)

Developing Restorative Practices That Are Trauma-Informed and Healing-Oriented

Systemic approaches that create enabling conditions for safety and belonging include:

- trauma-informed supports and healing practices, including means to learn about students' experiences and address their needs, as well as strategies such as mindfulness; and
- restorative practices, including community circles, spaces for calming and reflecting, and means for making amends and restoring community.

Trauma-informed supports and practices

Healing and wellness can be promoted by trauma-informed practices that include strong relationships, means to learn about students' experiences so they can be understood and addressed, and mindfulness to help students center and achieve calm.

Becoming a trauma-informed and healing-oriented school involves providing administrators, educators, and other school personnel with the knowledge and preparation to recognize and respond to those impacted by traumatic stress within the school community and promote wellness

for all students. As Joshua Kauffman, a school mental health specialist with Los Angeles Unified School District, describes:

> Ultimately, trauma-informed schools understand and recognize that children's behavior is a developmental response to past experience, so that instead of wondering what's wrong with a child or immediately beginning to label, we start to ask the question, "What might have happened that explains this child's behavior?" And all of a sudden, when we do that, understanding can manifest and we can begin to address the underlying needs that the child may have.

The experience of trauma can disrupt the development of neurobiological integration in ways that can affect mood, skill development, learning, emotional well-being, and relational trust. Trauma can be an individual experience that occurs as a function of chronic stressors associated with poverty—such as food or housing insecurity, lack of child care, lack of health care—or any number of other traumatic events, such as illness, loss of a family member, abuse, or bullying. Trauma can also be a collective experience—and may frequently be held in marginalized communities in which families may have to contend with daily challenges of survival; frequent incidents of discrimination; or violence associated with gangs, police shootings, or other causes.

The experience of trauma can cause students to become withdrawn, angry, disruptive, inattentive, or unable to focus. They may lose confidence in themselves and in the ability of those around them to handle their needs. They may be unable to complete classwork or homework and may have less capacity to handle other stressors calmly, losing composure at seemingly small events or challenges.

Attention to individual trauma, while important, may not by itself provide insight into the root causes of trauma in communities that are disproportionately affected by negative economic and environmental conditions. And a focus on trauma alone runs the risk of focusing on intervention and treatment of trauma rather than fostering the overall well-being of the individual who has experienced adversity and harm. Both the individual and collective experience of traumatic events are important. Therefore, while it is important to acknowledge the impact of trauma on learning, it is critical that administrators, teachers, and school personnel also implement practices that **center healing on both an individual and collective level**.

While it is important to acknowledge the impact of trauma on learning, it is critical that administrators, teachers, and school personnel also implement practices that center healing on both an individual and collective level.

One framework for trauma-informed school practice identifies the following four characteristics:

1. **Attachment-focused:** Educators engage in attunement, mentoring, and a consistent ethic of care to allow students to feel safe and cared for. This promotes neural integration, which is the key to resuming healthy development and achieving success in the academic environment. Efforts within attachment-focused learning communities are more likely to be healing, allowing students to increase resilience.

2. **Neurobiology-informed:** Trauma-informed practitioners rely on their understanding of the neurobiology of development, stress, and trauma. This knowledge base makes it clear that students struggling in the school setting may be experiencing stressors that are school based as well as caused by out-of-school factors. Significant stress and trauma are caused by implicit and explicit social values related to aspects of social identities that are either privileged or marginalized, such as race, class, language background, dis/ability status, sexual orientation, and more. Our understanding of stress and the brain requires educators to continually re-examine existing school practices to change those that may exacerbate trauma. As described in this section, these can include disciplinary practices, grouping and tracking practices, and other sources of stigma.

3. **Strengths-based:** A strengths-based trauma-informed approach looks for the capacities students have developed and acknowledges the ways in which they—and often their family members—are seeking to engage, adapt, and develop resilience to adverse circumstances. Insight into broader system factors reminds trauma-informed educators not to blame caretakers, but to view each other as partners in problem-solving and healing.

4. **Community-driven:** Trauma-informed practice is ultimately a commitment to being in community in a manner that provides a welcome and inclusive environment fostering relational safety and well-being, the basic ingredients we all need to thrive throughout our lives. A consistent ethic of care means that the relational values educators extend to students are offered to each other as well. Caring about educator well-being is a central value, since attuned and supportive interpersonal relationships nurture their resilience and well-being, which is necessary for them to attend to student well-being.[3]

Importantly, school designs that are trauma- and healing-informed include structures and practices to support attachment and recognize strengths and needs by ensuring that every student is known and supported by adults who have opportunities to learn about their lives and experiences so that they can marshal assistance when needed. These include structures such as advisories, looping, and smaller learning communities. (See "Positive Developmental Relationships" for more on attachment-building structures and practices.)

For students coping with trauma or emotional challenges, schools can:

- Train educators and staff to recognize students who are experiencing trauma in their lives and respond to them with caring instead of frustration or punishment.
- Increase access to school counseling—one-on-one and in small groups for students dealing with similar kinds of trauma—as well as to a broader system of supports. (See "Integrated Support Systems" for more detail on designing and implementing school support systems.)
- Increase outreach to families to gather information, support parents, and co-create collaborative approaches to support student health.
- Create quiet spaces in classrooms or in the building for cooling down or restorative time where students can defuse and reflect, followed by opportunities for conversation.

For instance, as part of an integrated approach to promoting social and emotional learning, teachers at Lakewood Elementary School in Sunnyvale, CA, use the "Chillax Corner" strategy. The

Chillax Corner offers space and activities for students to regulate their emotions when they are upset. It is a quiet area in the classroom with a table, a chair, and objects such as stress balls and fidget spinners that students can use to relax and prepare to participate in classroom activities. The Chillax Corner is introduced at the beginning of the school year and remains an important space in the classroom throughout the year where students can consistently go as they recognize the need for space and time to reflect and regulate their emotions. (See *Preparing Teachers to Support Social and Emotional Learning: A Case Study of San Jose State University and Lakewood Elementary School* for a closer look at these practices in action.)

Trauma-informed and healing-oriented schools implement practices that **promote wellness for all students** in addition to targeted supports for students dealing with trauma and other challenges. There is a range of strategies that schools can implement to reduce stress and promote physical and emotional well-being for all students. These include mindfulness and breathing practices used as a part of community meetings or lessons; breaks throughout the day that offer physical movement opportunities, such as active games, dance, yoga, martial arts, and exercise; lessons on brain science, growth mindset, stress, and healthy lifestyles in the core of elementary curriculum and secondary science and health curriculum; and classroom environments in which acknowledgment of stress and emotional issues in students' lives—shared and addressed appropriately—is simply part of the classroom culture. (See this brief video, *Getting Started With Trauma-Informed Practices*.)

Mindfulness is a particularly promising practice to consider. The use of mindfulness strategies and other techniques for calming oneself, as well as for monitoring and redirecting attention, has been found to benefit brain architecture, learning, attention, and stress management. Mindfulness practice—which focuses attention on breathing and cultivates greater awareness of one's experience infused with attention to care and compassion—and related contemplative practices have been linked to greater social and emotional competencies, including capacities for regulation, as well as reductions in stress and implicit bias.

The use of mindfulness strategies and other techniques for calming oneself, as well as for monitoring and redirecting attention, has been found to benefit brain architecture, learning, attention, and stress management.

For example, at Codman Academy, a public k–12 school in Boston, MA, teachers do a short, guided mindfulness practice when students return from the dining hall after lunch to transition from the energy of lunch and recenter themselves for learning. As one 2nd-grade student describes, "We do mindfulness because during lunch it gets a little crazy. So, when we go upstairs, we calm down so we can transfer to writing."[4] This brief video shows mindfulness in practice in one of the 2nd-grade classrooms and illustrates how one teacher accommodates students' different needs by offering choices in how they engage in the mindfulness practice.

Mindfulness strategies can also be integrated into instruction and can be designed to include both educators and school staff, which supports their self-care and stress management abilities. Pure Edge provides several free mindfulness tools that have been adopted by some districts—such as Jackson, MS, and Philadelphia, PA—and by entire states, including Delaware and Rhode Island.

Restorative practices

Restorative practices that increase safety and promote stronger academic, social, and emotional outcomes include community circles, strategies for conflict resolution, and means for making amends and restoring community.

Because efforts to support students' well-being and optimal development cannot enable meaningful long-term growth for students in environments that are otherwise authoritarian, punitive, and exclusionary, in order to create a healing-oriented environment, schools need to be able to eliminate zero-tolerance policies and exclusionary discipline and focus on educative and restorative practices.

Zero-tolerance policies that were widespread in many states and districts have led to high rates of suspension and expulsion that have also proved to be discriminatory, with students of color and students with disabilities disproportionately excluded from school. Evidence shows that this is, by and large, not because of worse behavior but because of harsher treatments for minor offenses, such as tardiness, talking in class, and other nonviolent behavior.

Restorative practices enable educators and school leaders to understand how they may unintentionally trigger or escalate problem behavior; these practices help students and staff cultivate strategies for resolving conflict and creating healthier, more positive interactions.[5] As Tiana Lee, the Alternatives to Suspensions Specialist at Brooklyn Center High School in Brooklyn, MN, described:

> The impacts of suspensions were clear: Our neediest students were falling further behind, and excluding them did little to improve their behavior. But simply ending suspensions was not enough, as we had still not begun to address the root causes of students' misbehavior.

Central to a restorative justice approach is the belief that all people have worth and that it is important to build, maintain, and repair relationships within a community.[6] Restorative practices enable adults and students to resolve conflicts and to sustain relationships, contributing to the overarching goal of creating a supportive school environment. Restorative practices are also essential to a trauma-informed approach that promotes healing among students and other members of the school community.

Restorative practices are "processes that proactively build healthy relationships and a sense of community to prevent and address conflict and wrongdoing."[7] (See Figure 3.1.) Relationships and trust are supported through universal interventions such as daily classroom meetings, community-building circles, and conflict resolution strategies, which are also part of many social and emotional learning programs. (See "Development of Skills, Habits, and Mindsets" for more on these practices.) These strategies are supplemented with restorative conferences, often managed through mediation by trained staff or peers, when a challenging event has occurred.

In addition to explicit conflict resolution training for students and staff, a restorative justice approach deals with conflict through systems that allow students to reflect on any mistakes, repair damage to the community, and get counseling when needed. Creating an environment in which students learn to be responsible and are given the opportunity for agency and contribution can transform social, emotional, and academic behavior and outcomes.

Figure 3.1
What Are Restorative Practices?

Source: Schott Foundation, Advancement Project, American Federation of Teachers, & National Education Association. (2014). *Restorative practices: Fostering healthy relationships & promoting positive discipline in schools*.

Accumulating research evidence suggests that shifting to restorative practices, with robust supports to enable the adults in schools to do so, reduces the use of exclusionary discipline, resulting in fewer and less racially disparate suspensions and expulsions while also making schools safer, improving school climate and teacher–student relationships, and improving academic achievement.[8]

The more comprehensive and well infused the restorative justice approach is within the school culture and ethos, the stronger the outcomes.[9] For example, a continuum model including proactive restorative exchanges, affirmative statements, informal conferences, large group circles, and restorative conferences substantially changed school culture and outcomes rapidly in one major district, as disparities in school discipline were reduced every year for each racial group, and gains were made in academic achievement across all subjects in nearly every grade level.[10]

Schools that are working toward infusing restorative practices aim to create an environment that is respectful, inclusive, and supportive. Research indicates that a key strategy to fostering such a culture is to proactively nurture relationships characterized by active listening and respect among students and staff.

These **restorative practices can be implemented at all grade levels**. Earlier in this section, we shared the use of daily dialogue circles at Glenview Elementary School in Oakland, CA, one of the schools implementing schoolwide restorative justice practices, to check in, settle disputes, teach skills, and build community (illustrated in this video). Another approach to building these skills is shown in this Bronxdale High School vignette.

Restorative Practices and Peer-Led Advisories at Bronxdale

Bronxdale High School is an inclusion high school serving 445 students, about one quarter of whom are students with disabilities, in a low-income community of color in New York City. The once chaotic and unsafe site is now a safe, caring, and collaborative community in which staff, students, and families have voice, agency, and responsibility. At Bronxdale, community building—accomplished through social and emotional learning work in advisories, student-designed classroom constitutions, and supportive affirmations and community development in all classrooms—is integral to the now-successful restorative approach.

As Bronxdale Principal Carolyne Quintana described, restorative practices have value only when there is something to restore, and that something is "the community, relationships, and harmony." Restorative deans support the building of community and implementation of a restorative justice approach, which includes teaching students behavioral skills and responsibility, and repairing harm by making amends through restorative practices such as peer mediation, circles, and youth court. The restorative deans' work is also supported by teachers, social workers, counselors, and community partners who are part of the school's multi-tiered system of support (MTSS) that enables trauma-informed and healing-informed supports for students. (See "Integrated Support Systems" for more detail on MTSS.)

Much of the foundational work is done in advisory classes, which are led by teachers and other professional staff and supported by student leaders in the school, who receive training to do so. In one 9th-grade advisory, for example, two 12th-grade Peer Group Connection (PGC) student leaders facilitate a circle in which students respond to an inventory on how they like to work: alone or with others. Since students work collaboratively in many classes, the inventory is an opportunity for students to reflect on and then publicly express their preferences and concerns about their working styles as well as consider how their preferences will impact demands for collaborative group work.

The students observe a "one mic" ritual in which a student who speaks passes an object to another student, which gives that student the authority to speak. Others understand that when someone has the "mic," they must be quiet and listen. One student comments, "I would push my friends away. I like to work alone. I am more of an introvert. I need to understand the logic behind everything. I need to know what [I can] do to not be a bad friend. I can lose my self-confidence very easily." Another remarks, "I am very detail oriented. I look at the architecture when I go places." Another notes, "I don't like working with people. What if we get a bad grade? Sometimes I am focused on myself and do not think about other people." Another shares, "I can lose confidence easily. It has to do with my self-esteem." Yet another notes, "Things that describe me: I like to work alone."

At the conclusion of the session, the two PGC leaders summarize what occurred and facilitate a sharing of lessons learned, demonstrating empathy, listening, and analysis skills as well as providing opportunities for 9th-graders to express empathy and the value of seeking to understand differences: "Everyone wants good grades. A lot of people don't hold grudges—this is good. How can we use these differences and similarities to help us in our group to work together?" A student responds, "Ask them why, so you can understand their thinking." By creating public spaces for students to make their coping strategies explicit, advisories create opportunities for members of a community to share knowledge and skills in support of each other.

The other PGC leader models sharing information about himself to foster trust and understanding of personal differences, noting: "I am not an imagination person. Some of you said you use imagination to put things in perspective. I can realize that now. Some said it is good to know others' differences—you could understand them."

When the other PGC leader asks students to reveal what they discovered about themselves from this activity, student responses reveal self-reflection and insight into their behavior, especially in their responses to people who are the same as and different from them. One student says, "It showed me that there are a lot of people I don't talk to, but in the future I want to because they are similar to me." Another confesses, "I learned that I hold a grudge." Another observes, "Some people like to talk to someone that is the same as they are."

Source: Adapted from Ancess, J., Rogers, B., Duncan Grand, D., & Darling- Hammond, L. (2019). *Teaching the way students learn best: Lessons from Bronxdale High School*. Learning Policy Institute.

Fostering Inclusive, Culturally Responsive Learning Environments

In addition to creating consistent, caring learning environments, it takes a set of proactive efforts to ensure that these environments are inclusive for all students and are culturally responsive and affirming. Structures that can create incentives for such efforts include culturally responsive and affirming curriculum materials and activities used in heterogeneous classrooms that provide universal access to high-quality curriculum, along with socially inclusive and supportive extracurriculars. Within these structures, practices that affirm students' value, draw on their cultural resources, and dismantle stereotype threats are critically important.

Inclusive and culturally responsive learning environments

> "[The teachers] treat us like people with emotions. You have real relationships with your teachers. We want to do our work because we care about our teachers."
>
> —New Tech High School Student[11]

Inclusive and culturally responsible learning environments affirm students' value by acknowledging their learning, contributions, and capacity.

It is often said that students learn as much *for* a teacher as *from* a teacher. And the teachers they learn the most from are those they believe care about them and see them as worthy of their investment. At Bronxdale High School, staff have developed explicit practices to ensure that they communicate the many ways they value each of their students, including the "Affirmation Station" shown in Figure 3.2.

As they are reinforcing a positive learning environment, teachers can affirm their students' interpersonal and problem-solving skills, even as they are helping them acquire more skills. The story in "Creating an Affirming and Emotionally Safe Learning Environment" below shows how a teacher at San Francisco Community School helps her 4th- and 5th-grade students feel affirmed as she creates a safe learning environment where students can take risks, develop confidence, and grow emotionally and academically.

Figure 3.2
Affirmation Station at Bronxdale High School

Source: Ancess, J., Rogers, B., Duncan Grand, D., & Darling- Hammond, L. (2019). *Teaching the way students learn best: Lessons from Bronxdale High School*. Learning Policy Institute.

Creating an Affirming and Emotionally Safe Learning Environment

San Francisco Community School teacher Kristin Bijur begins each day by providing her 4th- and 5th-grade students with an opportunity to express themselves and connect with each other. As students sit in a circle, they take turns greeting each other with a handshake. Throughout the day, she keeps her finger on the pulse of student feelings and interactions, employing several strategies to help students recognize how they feel, express themselves, and communicate with each other to resolve conflicts.

An important part of this process is creating a safe environment where students feel heard. As Bijur mentions,

> In dealing with student-to-student conflict, the thing that I have to do before I can take any action with solving the conflict is listen to them, because they need to know that I think that what they're feeling is important and valid.... I know that they probably are not going to be able to learn if they're feeling like somebody's made fun of them or somebody has disrespected them in some way and they're hurting about that.

For example, when a group of students address her to discuss an issue they are experiencing playing soccer, she makes sure to listen to them and affirm their feelings. Students take turns explaining the issue and actions they took to resolve it. Before getting into the details, she affirms them by saying,

> Gosh, you know, I have to say, even before we continue the rest of this conversation, I'm feeling so proud of this group of soccer players because it sounds like you're not getting upset with other people in inappropriate ways for getting in your space. You're trying to make room for other people, and it sounds like you're trying to solve this problem in a way that would be peaceful and harmonious. Is that true? I'm really impressed about that.

Source: Adapted from Annenberg Learner. (2003). Feelings count: Emotions and learning (Module 5). *The Learning Classroom: Theory Into Practice* [Video and Learning Module].

Directly addressing stereotype threats and creating identity-safe, culturally affirming environments improve academic performance while also strengthening belonging and a growth mindset.

At the start of this section, we described how learning is undermined when children experience a sense of threat. A particularly salient threat in our society and education systems is social identity threat, which can be triggered whenever a member of a group that is stigmatized in society feels they are at risk of being mistreated or misperceived in a given situation.[12] Both inside and outside of school, students often receive messages that they are less valued or less capable as a function of their race, ethnicity, family income, language background, immigration status, dis/ability status, gender, sexual orientation, or other status. When those views are reinforced and internalized, they can become self-fulfilling prophecies. Stereotype threat, "a type of social identity threat that occurs when one fears being judged in terms of a group-based stereotype,"[13] has been found to induce the body's stress response, leading to impaired performance on school tasks and tests that does not reflect students' actual capacity.

When adults appreciate and understand students' individual experiences, assets, needs, and backgrounds, they are able to support their students in ways that counteract societal stereotypes that may undermine their confidence. Such knowledge of students and respect for their backgrounds and the societal stressors on students can help teachers design instruction in ways that build their confidence and interrupt the negative effects of discrimination.

When adults appreciate and understand students' individual experiences, assets, needs, and backgrounds, they are able to support their students in ways that counteract societal stereotypes that may undermine their confidence.

One aspect of this work is the use of multimodal teaching strategies that deliberately support success for students who learn in different ways—like those that are part of Universal Design for Learning. (See "Rich Learning Experiences and Knowledge Development" for more discussion of these strategies.) Considered essential for students with disabilities, these strategies help a wide range of learners experience success in the classroom. In addition, teachers can help affirm students by finding ways to ensure that they are able to engage in classroom activities. For example,

a teacher may monitor patterns of classroom engagement and connect with those who may not actively speak up to find out how to support their participation in ways that they feel safe.

Educators can also use values affirmation interventions that guide students to reflect on and write about things most important to them—such as their relationships with friends or family, their personal interests, their personal goals for learning—during critical times during the year: the beginning of the school year, prior to tests, and before big holiday seasons or breaks. These interventions tell students that teachers want to learn about them. They also provide teachers with important information about students that enriches teachers' ability to draw on student experiences and goals in the ways they make connections in the classroom. Multiple studies have found that such strategies reduce the effect of stereotype threat among middle school students, resulting in higher academic performance for Black students for as long as 2 years after the interventions.[14]

In identity-safe and affirming classrooms, teachers avoid labeling students in ways that implicitly categorize some as worthy and others as unseen or problematic, and they instead find many ways to provide positive affirmations about individual and group competence. Support for cultural pluralism that builds on students' experiences and intentionally brings students' voices and experiences into the classroom also helps create an identity-safe and engaging atmosphere for learning to take place and enables all students to have a sense of safety and belonging.

Elements of Identity-Safe Learning Environments

Identity-safe learning experiences and communities promote student achievement and attachments to school by creating a sense of belonging and membership for each student and eliminating psychological threats to students' identities that could be triggered by negative messages, bullying, or marginalization. The elements of such experiences, found to support strong academic performance for all students, include the following:

- Teaching that promotes understanding, student voice, student responsibility for and belonging to the classroom community, and cooperation in learning and classroom tasks.
- Cultivating diversity as a resource for teaching through regular use of diverse materials, ideas, and teaching activities, along with high expectations for all students.
- Relationships based on trusting, encouraging interactions between the teacher and each student, and the creation of positive relationships among the students.
- Caring, orderly, purposeful learning environments in which social skills are proactively taught and practiced to help students respect and care for one another in an emotionally and physically safe classroom, so each student feels attached to the others.

Source: Adapted from Darling-Hammond, L., & Cook-Harvey, C. M. (2018). *Educating the whole child: Improving school climate to support student success*. Learning Policy Institute. Drawing on Steele, D. M., & Cohn-Vargas, B. (2013). *Identity Safe Classrooms: Places to Belong and Learn*. Corwin Press.

Teachers can also center projects around community engagement in ways that are culturally sustaining and affirming. (See "Connecting to Community Through the Arts.") They may also choose and make available readings that portray different cultural experiences and foster culturally affirming learning opportunities. The Historically Responsive Literacy Framework is a tool that aids teachers in this approach.

Culturally responsive and affirming environments create the conditions for productive learning that require struggle with challenging academic content because students feel they are expected and supported to succeed.

Connecting to Community Through the Arts: El Puente Academy for Peace and Justice

At El Puente Academy for Peace and Justice in New York City, the arts are one of the school's most important features for encouraging and enabling students to find their voice and explore their creativity. El Puente is a small public high school in Brooklyn, NY, serving predominantly students from Latino and lower-income families. El Puente has been pioneering youth development within the context of overall community development since its inception and is widely recognized for its innovation in culturally responsive practices, arts integration, and leadership development. El Puente's approach to educating the students it serves acknowledges and affirms students' cultural backgrounds, focuses on students' assets and potential rather than their deficits, and makes connections to urban youth culture. As founding principal Frances Lucerna has explained, "We do not follow a clinical model of problem and deficit but focus on potential and empowerment of young people and community for self-determination."[15]

One of El Puente's most significant activities illustrating the school's responsiveness to students' intellectual, social, and emotional development, as well as its commitment to community and social justice education, is the Integrated Arts Project.

The Integrated Arts Project provides students with the opportunity to identify, research, and analyze an issue affecting the community and, from the perspective of an artist, create solutions that will organize the community for change. The Integrated Arts Project unfolds with a design team that includes facilitators from diverse disciplines and community activists who collaborate to brainstorm, explore, and design a half-year-long, arts-driven curriculum project rooted in issues critical to the community and the world. In order to enact the project, the school block-schedules half a day per week to allow for mixed-grade, theme-based, team-taught classes—called Educational Opportunity classes—that focus on implementing the project. In addition, students participate in after-school activities also focused on the project.

El Puente's *Integrated Arts Project Handbook* describes how the project culminates in "daylong seminars, workshops, and performances facilitated and performed by young people for the entire community and, in some cases, followed up by institutional campaigns."[16] Students express their ideas through originally composed music, dance, drama, spoken word, and visual arts. The themes driving the initiative connect students to themselves, to their historical and cultural past, to their community, and to their future. Past projects have included The Sugar Project, which was inspired by a Williamsburg landmark, the Domino Sugar factory. Through the integration of literature, history, government, and multiple art forms, students examined the history of sugar in the Americas, Africa, and Europe, focusing in particular on the "cultures of resistance" of enslaved peoples in the Americas. The project culminated in an outdoor carnival performance. In 2012, students engaged in an investigation of the Latino Los Sures community of Williamsburg, Brooklyn. They collaborated with community artists, activists, and residents to document the history, culture, and legacy of Los Sures. Their research activities included interviewing community residents, photographing the neighborhood, and collecting artifacts (see the video *El Puente Integrated Arts Project* for examples).

As explained in the *Integrated Arts Project Handbook*, the project is a vehicle for

> … the social and personal transformation of young people into leaders, [which] happens most profoundly through the creative process and engagement in the arts as a venue for social change.… The arts provide a safe space for young people to go within themselves to create a rich *inner life* that nurtures a powerful sense of self, the world and themselves in the world.… The arts become a portal for young people to celebrate their creative power as human beings—*to have an affair with their souls*. Through the creative process, a young person can create an idea and explore the many different ways both individually and collectively to make it a reality. When driven by understanding and passion for human rights, the process of creating art becomes a powerful tool in the quest for social justice.[17]

Source: Adapted from Ancess, J., & Rogers, B. (2015). *Social emotional learning and social justice learning at El Puente Academy for Peace and Justice*. Stanford Center for Opportunity Policy in Education.

Heterogeneous, supportive learning environments

Stronger outcomes for students are achieved through universal access to high-quality curriculum and extracurricular activities in supportive, heterogeneous learning environments.

To create a school environment that is inclusive and explicitly anti-racist, schools must identify and eliminate harmful practices that can create stigma, exacerbate stress, and hinder the development of skills and mindsets for learning. This includes practices that perpetuate negative stereotypes, bullying, or microaggressions, including punitive and unfair discipline practices. It also includes practices that segregate or shame students—such as separate lunch lines for those receiving free or reduced-price lunch; identification or shaming of students who cannot pay school fees; listing students' grades or test scores publicly; or writing names on the board to identify students for punishment if they have violated a rule, rather than engaging in restorative practices.

Finally, exclusionary practices that can communicate differential worth and undermine achievement include tracking mechanisms that exclude students from high-quality curriculum.

Decades of research show that tracking harms students by reducing achievement for those exposed to a low-level curriculum. If two students who are achieving at the same level at the start of a school year are differently tracked, evidence shows that the one tracked "up" will have higher achievement at the end of the year than the one tracked "down." Their achievement is a function of the curriculum they have experienced, not their perceived ability at a moment in time. Low-tracked classes generally create experiences of both low-level, unengaging content and stigma. Less-experienced and less-expert teachers are also typically assigned to low-tracked classes.[18] Despite evidence of the benefits of detracking, in practice, tracking remains widespread in American schools, from the segregation of "gifted and talented classes" as early as kindergarten to the creation of tracks, lanes, or streams in middle school and high school for students perceived to be following different paths to their futures.[19]

Many new schools have been developed over the past three decades that have eschewed tracking, and a number of them are highlighted in this volume. Established schools have also successfully moved forward with detracking, as illustrated by Hillsdale High School's three-year conversion process from a large, traditional public school into three small learning communities with

heterogeneous grouping in 9th and 10th grades, before students begin to specialize around their interests. (Learn more about Hillsdale's redesign process and that of other public high schools that have done the same in the Windows on Conversions case study series.)

High-quality learning experiences can also be provided through extracurricular activities if engaging opportunities are made available without screens or financial barriers. There is strong evidence that suggests that participating in socially supportive extracurriculars can affirm students' identities; strengthen their interpersonal skills for forming healthy relationships; and, in some cases, provide them with important future career skills and credentials.[20]

Although almost every school offers extracurricular activities, such as music, academic clubs, and sports, there are certain types of extracurriculars that are less likely to be available to many students, either because they are selective (e.g., require auditions and/or restrict participation to just a few students) or because they require financial commitments or other resources for uniforms, equipment, transportation, and the like.[21] Nonacademic clubs, such as affinity groups, vocational or professional clubs, and service or hobby clubs, have been found to be less available in less affluent schools but may in fact be more socially supportive for a wider variety of students. Offering high-status extracurricular opportunities and ensuring that there are no barriers to participation can change students' lives, as the Social-Impact Robotics Club at East Palo Alto Academy shows.

Social-Impact Robotics Club

At East Palo Alto Academy, a public high school in East Palo Alto, CA, serving exclusively students of color from low-income families, many of them from new immigrant families, one of the extracurriculars available to students is the Dream Lab. Dream Lab is a social-impact robotics club that allows them to learn engineering in the service of others. The school partners with Project Invent, a nonprofit that partners with local high schools to bring students social-impact programs to solve problems for members of the community. For one of their projects, students worked together to create a digitally enhanced cane that lights up at night and vibrates to let the user, a blind community member, know when the lights are in use. According to the high school's STEM director, Aaron Ragsdale, the social-impact robotics program provides an opportunity for students to gain a sense of empowerment, confidence, and a sense of agency, shifting their thinking to "I'm not just a consumer; I can actually produce things that can change the world."

Source: Adapted from Kadvany, E. (2019, February 8). East Palo Alto students learn engineering in the service of others. *Palo Alto Online*.

Summary

In environments that are consistently caring, safe, attuned to relationships, inclusive, and culturally responsive, youth learning and well-being will be not only promoted, but empowered. There is no one formula for creating and sustaining these environments, but key structures—including co-developed norms, restorative approaches to discipline, heterogeneous classrooms and socially supportive extracurriculars, and culturally affirming learning opportunities—can increase equity of experience, opportunity, and outcomes for all students.

Where to Go for More Resources

Building a safe and caring community

- How Learning Happens (Edutopia): This video series illustrates strategies that enact the science of learning and development in schools and other learning settings. It includes several video series on various topics, such as fostering positive relationships, cultivating a belonging mindset, developing foundational skills and academic confidence, establishing positive conditions for learning, and learning beyond the school day.
- Turnaround for Children Toolbox (Turnaround for Children): This interactive toolkit was designed for teachers, school and district leaders, support staff, and others to reflect on and assess how to put into place whole child redesign, including co-creating norms and expectations and putting into place consistent routines.
- Developing Community Agreements (National Equity Project): This resource provides tips for developing community agreements and an accompanying resource that walks through a suggested approach to engaging students and staff in the process.
- Climate Connection Toolkit (WestEd): This toolkit includes activities that school leaders can use to encourage school community members to define, examine, and build norms that nourish a sense of belonging and stronger relationships.
- Partnership Implementation Framework With Evidence Guide (Partnership for Los Angeles Schools): This self-assessment tool includes implementation criteria for key components to build a supportive school system across six areas: instructional leadership, teaching and learning, data-driven instruction, school culture and restorative communities, engaged and empowered communities, and organizational leadership.
- Resources on Positive School Discipline (American Federation of Teachers): This website compiles resources from the American Federation of Teachers and its partners to help school leaders and educators implement positive discipline strategies.
- *The Advisory Guide: Designing and Implementing Effective Advisory Programs in Secondary Schools* (Engaging Schools): This guide is intended to help secondary educators design, implement, and sustain an advisory program that supports community building and the development of social and emotional awareness and skills.
- *Getting Classroom Management Right: Guided Discipline and Personalized Support in Secondary Schools* (Engaging Schools): This book provides resources designed for educators to organize and manage their classrooms and work with adolescents to create learning environments that foster fairness, mutual respect, accountability, and self-discipline.
- 10 Powerful Community-Building Ideas (Edutopia): This article compiles activities and includes illustrative videos for community building for elementary, middle, and high school.
- *Conflict Resolution in the High School* (Engaging Schools): This guide includes lessons for educators to help teach high school students essentials skills for managing and resolving interpersonal conflicts in positive ways and exploring diversity, power, and prejudice along the way.

- Valor Collegiate Academies (Learning Accelerator): Valor Collegiate Academies partnered with Learning Accelerator to share resources about Valor's relationship-centered human development unique school model, Compass, including details of the social and emotional learning and growth activities in which staff participate.

Instituting restorative practices that are trauma-informed and healing-oriented

- *Getting Started With Trauma-Informed Practices* (Edutopia): This video describes the emotional and academic benefits students reap when teachers use strategies tailored to young people who have experienced trauma.
- Building Trauma-Sensitive Schools (National Center on Safe Supportive Learning Environments): This website provides resources and modules for building a trauma-informed school, and it recommends that these resources be used as part of a group-based training.
- Trauma-Informed SEL Toolkit (Transforming Education): This toolkit provides information about how trauma impacts students, strategies educators can implement in the classroom, secondary traumatic stress, and strategies for educator self-care. The toolkit also provides prompts to facilitate educator learning and engagement with the material.
- Trauma-Informed Resources for Students and Teachers (American Federation of Teachers): This website links to trauma-informed resources for teachers with a particular emphasis on mental health resources and how to navigate traumatic current events.
- Making Classrooms and Schools Trauma-Informed and Healing-Centered (Greater Good in Education): This website offers strategies to support teacher and student well-being, such as how trauma- and resiliency-informed schools can recognize triggers at school and be aware of signs or symptoms of distress.
- Model School Code on Education and Dignity (Dignity in Schools Campaign): The Model Code toolkit is organized into five chapters: (1) Education; (2) Participation; (3) Dignity; (4) Freedom from Discrimination; and (5) Data, Monitoring, and Accountability. Each of these chapters addresses a key component of providing a quality education and reflects core human rights principles and values. Each chapter includes recommended policies for states, districts, and schools.
- *Restorative Practices: Fostering Healthy Relationships & Promoting Positive Discipline in Schools* (Schott Foundation, Advancement Project, American Federation of Teachers, and National Education Association): This guide provides examples of restorative practices, implementation tips and strategies, and examples from school districts.
- *Restorative Justice Implementation Guide: A Whole School Approach* (Oakland Unified School District): This guide was designed to support someone facilitating restorative practices in their school to create an implementation plan for introducing restorative practices to the school community.
- Implementing Restorative Practices (Minnesota Department of Education): Minnesota has developed a suite of resources, including key principles to guide restorative practices

in schools and implementation guidance to provide school districts, administrators, and educators with resources to integrate restorative practices into the schoolwide climate, discipline, and teaching and learning.

- Restorative Justice: Resources for Schools (Edutopia): This is a compilation of resources and case studies for bringing restorative justice into schools and classrooms.

Supporting culturally responsive and inclusive school environments

- Identity Safe Classrooms: Places to Belong and Learn (Dorothy M. Steele and Becki Cohn-Vargas): This website, based on a book of the same name, includes activities, practices, and resources for creating identity-safe classrooms.
- The Power of Affirming One's Values: Classrooms as Supportive Spaces (Northeastern Center for Advancing Teaching and Learning Through Research): This website provides values affirmation activities that can be easily implemented in 15 minutes or less with students.
- Not In Our School (Not In Our Town): This website includes lesson plans, professional development guides, and other resources to support the creation of safe, accepting, and inclusive school communities.
- School Climate and Inclusion (National School Climate Center): This brief includes strategies for guiding effective practice to support inclusion as a part of the holistic life of a school.
- Identity Safe Classrooms and Schools (Learning for Justice): This blog post is part of a three-part series that links implicit bias, stereotype threat, and identity safety and describes practices educators can draw upon to build identity-safe classrooms and schools.
- Culturally Sustaining Pedagogy Honors the Humanity and Identity of Young People (EducationWeek): This blog post is part of a four-part series on culturally sustaining pedagogy and provides the perspectives of four educators on specific ways to be more culturally responsive and culturally sustaining.
- *Culturally Responsive Teaching and the Brain* (Zaretta Hammond): This book offers an approach for designing and implementing culturally responsive instruction consistent with research on brain development and neuroscience.

- Universal Design for Learning Guidelines (CAST): These guidelines are meant to provide concrete strategies to guide the implementation of a Universal Design for Learning framework in any learning environment and are accompanied by videos, FAQs, and additional resources.

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Rich Learning Experiences and Knowledge Development

Developing Deep Knowledge of Content and Language Through Inquiry at San Francisco International High School

The lesson of the day in a 9th- and 10th-grade biology class at San Francisco International High School focuses on a central question: "Should soda have a tax?" The class of 25 students, roughly divided between 9th- and 10th-graders, includes several students in both grade levels who are recent arrivals and have been in the United States for 6 months or less. Even the students who have been at San Francisco International the longest have only been in the United States for 18 to 24 months. In this school and others that are part of the Internationals Network across the country, newcomers who arrive without knowing the English language graduate, enter college, and succeed at much higher rates than their peers, having experienced an inquiry-based curriculum that engages them in meaningful and challenging tasks that they revise to meet high standards of performance.

Like other project-based learning environments, instruction for this heterogeneous class is connecting academic topics, such as biology, to real-world topics—in this case, nutrition and policy. The veteran teacher, Patricia, has built extensive scaffolds into her lesson that were designed to meet students at their English language acquisition, content knowledge, and skill development levels. She moves through the classroom engaging individual students, small groups of students, and the whole class.

She intentionally leverages the assets that her students have brought to the classroom, particularly their native language fluency. The core question was written in English and in the five other languages spoken by the students in the class to give students an immediate starting point in their native languages that allows them to engage with the content questions even if their English language skills were not yet developed to the point of allowing them to do so fully in English.

The teacher uses other techniques that allow students to use their native languages to support themselves and one another in engaging with the rigorous content. For example, throughout the classroom, students use Google Translate to translate words from Spanish, Arabic, and other languages. In contrast to classrooms in which students' native languages are minimized or seen through a deficit lens, students leverage their home languages to make meaning of complex grade-level academic content. With students from multiple linguistic backgrounds, English is the common language and the language of formal academic discourse. Yet English is not positioned as the only valuable language. The assets-based classroom environment makes students feel comfortable taking risks to speak, read, and write in English, but they also use their native languages as a valuable tool to be harnessed and developed.

The teacher also takes steps to make instruction and content accessible and to further students' vocabulary and writing development. For example, she prominently displays visuals from earlier lessons that students have labeled, and she has research articles and documents readily available so that students can access them through the inquiry process. In addition, each portion of the lesson is carefully chunked into discrete sections to allow students to understand the content and

to apply their emerging English skills. For instance, students engage with pictures relevant to the soda tax debate and connect those pictures with academic English words they have learned in previous lessons (e.g., "glucose"). One chunked exercise includes the following stages:

- Each student chooses one picture and labels it in English with scientific terms that have previously been taught.
- In small groups, students discuss the pictures using English: What did other people write? What did it make you think?
- Next, using the labeled pictures from their groups, students individually write "a complex sentence—a big sentence" in English that can be used in their final essays.
- In doing so, students need to use the English words "but," "because," or "so." For example: "When you don't eat, the glucose decreases because your body uses the energy."

During the lesson, the teacher walks throughout the room meeting individually with students to make sure that they are receiving the supports they need to successfully engage with the language and content. She also constantly moves her hands, draws pictures on the board, points to visual scaffolds on the walls, and makes motions that have meaning, as if she is playing a 90-minute game of charades with the students. She also has developed a series of sounds that are not English words but that the students associate with an action (e.g., a sound that encourages students to look at their peers who are speaking or a sound that encourages students to use sentence starters that are on the walls). This simple yet effective method seems to help ease the cognitive load for her students who are doing far more than the typical native English speaker would be doing in such a class. She repeatedly reminds her students of her expectations for participation and reinforces participation and structural routines to keep students engaged.

Eventually, students build from these smaller tasks to craft thesis statements and ultimately write persuasive essays in English that support their position on the value of soda taxes. While the development of academic English related to the content is clearly scaffolded through these steps, the teacher also has an explicit focus on science, engaging the students on both the science behind how sugary drinks affect humans and the social science behind their impact on communities. Over multiple weeks, students develop the content knowledge and the English literacy skills needed to engage orally and in writing on the topic in sophisticated ways.

Source: Adapted from Roc, M., Ross, P., & Hernández, L. E. (2019). *Internationals Network for Public Schools: A deeper learning approach to supporting English learners*. Learning Policy Institute.

Overview of Rich Learning Experiences

The classroom profiled in the vignette above provides a window into the pedagogical approaches, curricular designs, and assessment practices that enable students to deeply understand disciplinary content and develop skills that will allow them to solve complex problems; communicate effectively; and, ultimately, manage their own learning. It illustrates how a teacher can skillfully blend inquiry-based learning with strategic elements of direct instruction using multiple modalities of learning that help students draw connections between what they know and what they are trying to learn. By using a well-scaffolded and meaningful task that relates to students' lives, this teacher helps her students advance their understanding of human biology, the English language, and the writing of persuasive essays while affirming their cultural and linguistic identities. By providing

them with means to facilitate their own learning—through the use of multiple languages, tools like Google Translate, and opportunities to collaborate and share their observations—the teacher also promotes student agency and a growth mindset: Students know how to get better, and they see themselves advancing with effort.

San Francisco International High School is just one of many innovative schools that have demonstrated how standards can be better taught and learned when students are motivated by the opportunity to dive deeply into serious questions, demonstrating what they have learned by showing and explaining the studies, products, and tools they have developed. This kind of learning process can, with the right kind of teaching supports, help students develop the executive functioning and metacognitive skills needed to plan, organize, manage, and improve their own work and become more self-directed—skills that are essential both for this more complex educational world and for the world of college and careers beyond.

Schools and classrooms like these embody an important fact: Learning is a function both of teaching—what is taught and how it is taught—and of student perceptions about the material being taught and about themselves as learners. Students' beliefs and attitudes have a powerful effect on their learning and achievement. Motivation can be nurtured by skillful teaching that provides meaningful and challenging work, within and across disciplines, that builds on students' culture, prior knowledge, and experience, and that helps students discover what they can do in their zone of proximal development—that is, what the child can do with a range of robust supports. Students learn best when they are engaged in authentic activities and collaborate with peers to deepen their understanding and transfer of skills to different contexts and new problems. Rich learning experiences can be supported by inquiry-based learning structures, such as projects and performance tasks, with thoughtfully interwoven opportunities for direct instruction and opportunities to practice and apply learning; meaningful tasks that build on students' prior knowledge and are individually and culturally responsive; and well-scaffolded opportunities to receive timely and helpful feedback.

Why Rich Learning Experiences Are Important: What the Science Says

As we have described in earlier chapters, brain architecture is developed by the presence of warm, consistent, attuned relationships; positive experiences; and positive perceptions of these experiences. Students need a sense of physical and psychological safety for learning to occur, since fear and anxiety undermine cognitive capacity and short-circuit the learning process. In addition, both neuroscience and research in the learning sciences have established that the brain actively pursues meaning by making connections and that it is stimulated by curiosities and inquiries that sustain interest and effort. The following key findings should inform educational practice.

Children actively construct knowledge based on their experiences, relationships, and social contexts. The brain develops and learning occurs through connections among neurons that create connections among thoughts and ideas. Learners connect new information to what they already know in order to create mental models that allow them to make sense of new ideas and situations. This process works best when students actively engage with concepts and when they have multiple opportunities to connect the knowledge to personally relevant topics and lived experiences, which is why culturally responsive practice is essential to the learning process. Effective teachers support learners in making connections between new situations and familiar ones, focus children's attention, structure experiences, and organize the information children receive, while helping them develop strategies for intentional learning and problem-solving.[1]

Variability in learning is the norm, not the exception. The shape of each child's growth is unique, as biology interacts with experiences and relationships. While development generally progresses in somewhat predictable stages, children learn and acquire skills at different rates and in different ways. Because each young person's life is unique, there are multiple possible pathways to healthy learning and development. Rather than assuming all young people will respond to the same approaches equally well, effective educators personalize supports for different individuals. Supportive learning environments avoid attaching labels to youth or designing learning experiences around a mythical average. When educators try to force all young people to follow a single sequence, path, or pace, they miss the opportunity to reach each child, and they can cause children to adopt counterproductive views about themselves and their learning potential that undermine progress.

When educators try to force all young people to follow a single sequence, path, or pace, they miss the opportunity to reach each child, and they can cause children to adopt counterproductive views about themselves and their learning potential that undermine progress.

Motivation and performance are shaped by the nature of learning tasks and contexts. In contrast to long-standing beliefs that ability and motivation reside in the child, the learning sciences demonstrate that children are motivated when tasks are relevant to their lives, pique their curiosity, and are well scaffolded so that success is possible. Tasks are made doable when they are connected to what is already known and chunked into manageable pieces that are not overwhelming. Children are motivated to learn by questions and curiosities they hold—and by the opportunity to investigate what things mean and why things happen. Humans are inquiring beings, and the mind is stimulated by the effort to make connections and seek answers to things that matter. Learning and performance are shaped by the opportunities to explore actions and ideas, receive feedback from others and the environment, and continue to refine and practice with assistance until mastery is achieved.

Transferable learning requires application of knowledge to authentic tasks. Much information that is learned in school is forgotten because it is not applied and used in ways that would allow it to be deeply understood. This "inert knowledge" is often the result of transmission-style teaching that offers disconnected pieces of information that are covered but not analyzed, memorized for a test but never actively used for a meaningful purpose. Knowledge that is transferable is learned in ways that engage children in genuine, meaningful applications of knowledge: writing and illustrating a book or story, rather than completing fill-in-the-blank worksheets; conducting a science investigation, rather than memorizing disconnected facts that might quickly be forgotten. Such learning engages higher-order skills of analysis, synthesis, critical thinking, and problem-solving and allows knowledge to be understood deeply enough to be recalled and used for other purposes in novel situations.

Students' beliefs about themselves, their abilities, and their supports shape learning. Children's expectations for success influence their willingness to engage in learning. These expectations depend on whether they perceive the task as doable and adequately supported as well as whether they have confidence in their abilities and hold a growth mindset. Those who believe they can succeed on a task work harder, persist longer, and perform better than those who

lack that confidence. Those who believe they can improve through effort tend to be willing to try new things and to work harder when they encounter an obstacle, rather than giving up. These traits are developed in environments in which students believe they are viewed as competent and trust adults to support them, and in which they do not feel threatened by stereotyping, bullying, or other challenges. A child's performance under conditions of high support and low threat will be measurably stronger than it is under conditions of low support and high threat. In such identity-safe environments in which cultural connections are made and adults are responsive and supportive, children's academic performance climbs.

What Can Schools Do to Foster Rich Learning Experiences?

To build on these understandings about learning, schools should provide meaningful, culturally connected work within and across core disciplines (including the arts, music, and physical education) that builds on students' prior knowledge and experience and helps students discover what they can do and are capable of. The acquisition of more complex and deeper learning skills can be supported by creating authentic activities that engage students in working collaboratively with peers to deepen their understanding and transfer skills to different contexts and new problems.

Because learning processes are very individual, teachers need opportunities and tools to come to know students' experiences and thinking well, and educators should have flexibility to accommodate students' distinctive pathways to learning as well as their areas of significant talent and interest. Approaches to curriculum design and instruction should recognize that learning will happen in fits and starts that require flexible scaffolding and supports, differentiated strategies to reach common goals, and methods to leverage learners' strengths to address areas for growth.

- **Structures that foster rich learning experiences include:**
  - curriculum and program offerings that support inquiry and problem-based learning around rich, relevant tasks that are culturally connected and collaboratively pursued;
  - performance assessments and rubrics focused on higher-order thinking skills and applications of knowledge that structure the teaching, tasks, feedback, and metacognitive reflections that guide learning; and
  - tools for learning about students' experiences, interests, strengths, and readiness that can be built upon to draw connections to the curriculum and foster learning (e.g., learning surveys, student reflections, observation protocols, formative assessments, and exit tickets).
- **Practices that develop competence and confidence in learners include:**
  - "two-way" pedagogies that provide knowledge of students as learners and individuals in order to enable explicit connections between students' prior knowledge and cultural experiences and the content under study;
  - careful scaffolding and supports for students to undertake rich, engaging, authentic tasks, creating zones of proximal development for rich learning through active inquiry and strategic, explicit instruction;

- recognition of strengths and skills with opportunities to continue to develop them and share them with others, developing positive academic identities;
- cognitive supports that make tasks doable by structuring them well, reducing unnecessary cognitive load, and that use multiple modalities and tools for accessing information and expressing learning (as in Universal Design for Learning); and
- opportunities to develop mastery and metacognitive skills, including opportunities to access resources; collaborate; practice; give and receive useful feedback; and reflect, revise, and improve, so that students can ultimately manage their own learning toward mastery of content and deeper learning skills.

To be effective, these structures and practices for knowledge development need to be combined with the developmental relationships; features of positive learning environments; acquisition of social and emotional skills, habits, and mindsets; and integrated student supports discussed in other parts of this playbook. When they all come together, teaching and learning look much like they do in Ted Pollen's 4th-grade classroom in New York City. (See "Rich Learning Experiences for Deep Understanding at Midtown West.")

Rich Learning Experiences for Deep Understanding at Midtown West

In Ted Pollen's 4th-grade classroom at Midtown West School in New York City, a diverse group of 27 students is deeply engaged in a mathematics inquiry focused on understanding the concepts of range, mean, median, and mode. Some are seated around tables, while others are in pairs or trios on the rug in the classroom meeting area. While some teachers might introduce the three terms with definitions and rules for calculating them and give students a worksheet of problems to fill out, Ted's class has been conducting a study that provides them with the data they are now analyzing: They have already measured and recorded the height of everyone in their own classroom and all the children in one of the kindergarten classrooms who are their "reading buddies." Each is now determining how to display the data distributions with bar graphs they constructed individually and figuring out the mean, median, and mode for each class to compare them. Working in teams, they use various tools, such as manipulatives and calculators, as they advise and query one another about what to do.

Ted moves unobtrusively among groups, watching the process and occasionally asking questions to help move students to the next level of understanding. It is clear that he is thinking about students' zones of proximal development as he chooses his questions. Ted says to one group: "Think about your design. What's the best way of displaying the data so you can make an actual comparison?" In another, he asks, "Can someone give me the range for kindergarten? Our range? Are there any outliers?" This led to a realization that there was little overlap between the two groups, but there were a few relatively short 4th-graders and one very tall kindergartner. A student said proudly, pointing to that data point: "That's my reading buddy!"

In yet another group, Ted observes to one of the boys, "You're having the same problem that she's having," pointing to a tablemate to encourage the two of them to work together. They begin counting and calculating to solve the problem jointly. Ted never gives away the answer, but he assists the problem-solving process with questions that carefully scaffold student understanding.

He watches over a student with autism who is doing her work with a one-on-one aide. The student sings to herself periodically while she is doing the work but continues to make progress. In the hubbub of the classroom, her singing is not a distraction to the others, as they all focus intently on communicating to find solutions to this highly motivating puzzle. Every single student has made significant progress in developing a deep understanding of these key statistical concepts that often elude students much older than themselves.

Student work covers the classroom walls: Especially prominent are student accounts of the lives of slaves in New Amsterdam and New York (1621–1680) and posters illustrating various fractions problems they have tackled and solved, including how they have split sub sandwiches among various numbers of people. A classroom constitution that was collectively developed and signed by each student and teacher is displayed, along with a "Problem Parking Lot" with stickies listing various problems and questions the class has agreed to return to.

On the back shelves, one set of tubs contains manipulatives for mathematics. Another set of tubs has books labeled by type, all connected to topics of study, such as African American history, biographies, and books written by authors the class has studied. Handmade globes and a timeline string with chronological date cards of important events hang from the ceiling. The meeting area in front of a whiteboard is covered with a rug that is a map of the world.

Also on the wall are many posters reminding students about their routines. One summarizes the rules for "Book Club." Another asks, "What is figurative language?" and clarifies that it is "when words mean something other than their literal meaning." The poster defines what most would think of as high school terms: simile, metaphor, hyperbole, personification, alliteration, onomatopoeia, idiom, allusion, and oxymoron, offering concrete examples of each.

Other posters developed by students and teacher include "Writing workshop conferencing protocol," "Poetry guidelines," "Persuasive essays," "Jobs in a reading conference" (enumerated for both the student and the teacher), and "Elements of a news magazine article." These are often in the students' own words, codifying their learning so they can share it and go back to it as needed. Another poster is titled, "What we know about maps," while still another describes "Multiplying 2-digit by 1-digit numbers: The traditional algorithm."

Invisible in this moment are the school supports that make this productive hubbub possible: free breakfasts for all children; free transportation for children who live in temporary housing; a Family Center that offers educational workshops, cultural connections, and family support services; extended after-school time and services; twice-annual student–family–teacher conferences; and a set of children's rights that include "I have a right to be happy and to be treated with compassion in this school," "I have a right to be myself in this school. This means that no one will treat me unfairly," and "I have the right to be safe in this school." Community-building and conflict resolution are explicit schoolwide efforts. Although the school is overcrowded, it is welcoming in every respect.

Source: Adapted from Darling-Hammond, L., Oakes, J., Wojcikiewicz, S., Hyler, M. E., Guha, R., Podolsky, A., Kini, T., Cook-Harvey, C., Mercer, C., & Harrell A. (2019). *Preparing Teachers for Deeper Learning*. Harvard Education Press.

This short vignette illustrates many of the elements supporting rich learning experiences in a classroom and school that are grounded in the science of learning and development: Ted supports strong, trusting relationships in his classroom, as well as collaboration in the learning process, connections to prior experience, inquiry interspersed with explicit instruction where appropriate, and support for individualized learning strategies as well as collective learning. Authentic, engaging tasks with real-world connections motivate student effort and engagement, which is supported through teacher scaffolding and a wide range of tools that allow for personalized learning and student agency. Other scaffolds—like the charts reminding students of their learning processes and key concepts—support self-regulation and strategic learning while reducing cognitive load in order to facilitate higher-order thinking and performance skills. These also enable student self-assessment, as well as peer and teacher feedback that is part of an ongoing formative assessment process. Routines for reflection on and revision of work support the development of metacognition and a growth mindset.

Meanwhile, students' identities as competent writers, scientists, and mathematicians are also reinforced, as their work dominates the walls of the classroom and is the focus of the learning process. All students feel they belong in this room, where they are learning to become responsible community members, critical thinkers, and problem-solvers together. A range of culturally connected curriculum units and materials supports that sense of inclusion, while a wide array of school supports reinforces that inclusion by addressing student and family needs in multiple ways and including families as partners in the educational process.

Like Midtown West, many schools have been developing curricular approaches that aim for deeper understanding that reflects the growing knowledge base about how people actually learn: by actively constructing knowledge through authentic learning experiences that build on students' prior understanding and cultural funds of knowledge.[2] However, a number of engrained structures from older factory-model school designs can get in the way of this quest. These include an overreliance on transmission teaching driven by pacing guides that assume students all learn in the same way, at the same pace, by passively listening and answering questions, rather than as active drivers of their own learning. The coverage expectations of current standardized tests, which are typically limited to multiple-choice questions, can reinforce this mode of teaching, even though evidence shows that students taught through deeper learning strategies do equally well on these tests but much better on assessments of higher-order thinking and performance skills.[3]

Other remnants include siloed courses in which students are expected to learn content in separate and often disjointed ways, making interdisciplinary connections and knowledge application less frequent,[4] and tracking systems that sort students into different learning pathways based on determinations of their measured "ability."[5] Tracking—which typically also segregates students by race, class, language background, and dis/ability status—often shapes both the disciplinary and curricular content in which learners engage and the ways they are taught. Studies have shown that students in higher tracks often engage in richer and more meaningful learning approaches, while those assigned to lower tracks are offered more rote and passive learning with minimal opportunities for critical thinking.

As Table 4.1 suggests, teaching in the ways that children actually learn will, in many ways, require reimagining the purposes and accoutrements of school. Schools that are designed to unleash the genius within every child have replaced the standardized assembly line with greater personalization, grounded in the knowledge that each child's identity, cultural background, developmental path, interests, and learning needs create a unique path for them. Students from diverse backgrounds engage in collaborative inquiry-based learning by pursuing questions and problems that matter to them and to their communities. Rather than memorizing facts and regurgitating them on a test, students synthesize existing knowledge, apply it to open-ended questions and complex problems, and create something of value for an authentic audience beyond school. Adults recognize that children are fiercely curious and have wonderful ideas and provide them with rich, deeper learning experiences in heterogeneous classrooms that cultivate their sense of belonging, self-efficacy, and purpose.

Table 4.1
Transforming Schools to Advance Rich Learning Experiences

Transforming from a school with ...	Toward a school with ...
transmission teaching of disconnected facts	inquiry into meaningful problems that connect areas of learning
a focus on memorization of facts and formulas	a focus on exhibitions of deeper learning
standardized materials, pacing, and modes of learning	multiple pathways for learning and demonstrating knowledge
a view that students are motivated—or not	an understanding that students are motivated by engaging tasks that are well supported
a focus on individual work; consulting with others is "cheating"	a focus on collaborative work; consulting with others is a major resource for learning
curricula and instruction rooted in a canonical view of the dominant culture	curricula and instruction that are culturally responsive, building on students' experiences
tracking, based on the view that ability is fixed and requires differential curriculum	heterogeneous grouping, based on the understanding that ability is developed in rich learning environments

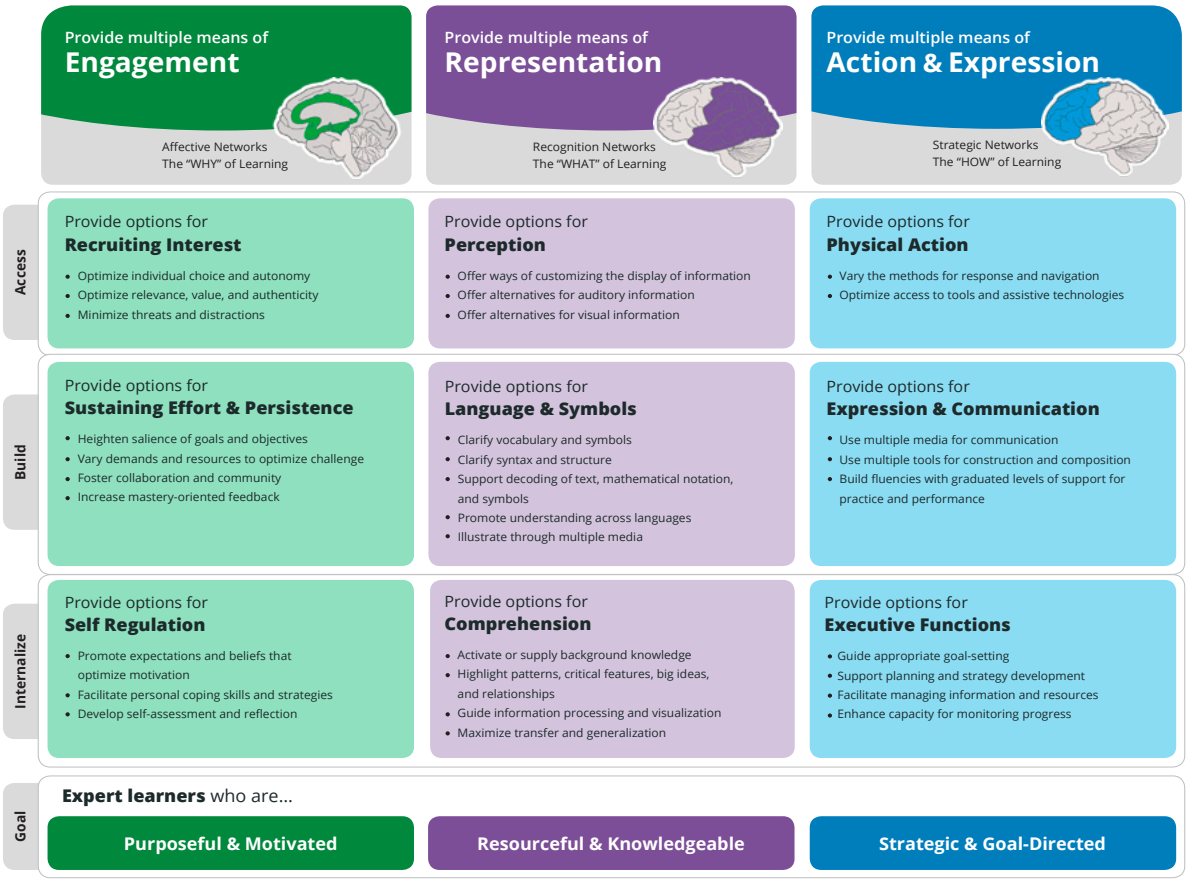
Supporting Diverse Learners Through Universal Design for Learning

Universal Design for Learning enables students to use multiple tools, forms of engagement, and modes of expression to demonstrate learning.

As Todd Rose notes in "The Myth of Average," every human brain is different, and every path to learning will vary as well. A critical aspect of enabling success for diverse learners without labeling, tracking, and stigma is the use of multiple modalities of engagement and expression in the classroom—and the use of multiple representations that can connect to students' different experiences and prior knowledge.

These approaches are codified by Universal Design for Learning, which establishes guidelines for improving and optimizing learning for all students based on scientific insights about learning and development. These guidelines provide concrete principles and strategies that can be applied to any subject or discipline to minimize barriers and maximize access to participation in meaningful learning opportunities. The guidelines are organized into three principles involving multiple means of engagement, representation, and action for accessing information: (1) building understanding, effort, and persistence; (2) internalizing learning through self-regulation and comprehension; and (3) creating options for expression, communication, and the building of executive function (e.g., goal setting, strategy development, monitoring progress) that can support learning (see Figure 4.1 below and this brief video, *UDL at a Glance*).

Figure 4.1
The Universal Design for Learning Guidelines



Source: CAST. (2018). *Universal Design for Learning guidelines version 2.2* [Graphic organizer].

We saw these principles in action in the vignette of San Francisco International High School at the start of this section. In that vignette, we see how students who have different linguistic and cultural backgrounds, and differing amounts and kinds of formal education, worked collaboratively to tackle a common inquiry-based task with the use of multiple means of expression, supportive learning tools, and multiple representations by their teacher and their peers.

Building on these principles, many new school designs have created untracked approaches to teaching and learning that have led to much higher levels of success for diverse students. Such national and local school networks include Big Picture Learning, EL Education, Internationals Network, New Tech Network, Center for Collaborative Education, Envision Education, Linked Learning, and others. (See also "Development of Skills, Habits, and Mindsets" for more detail on collaborative learning strategies for engaging all learners.)

Scaffolding for Success

Learning scaffolds provide students with guidance that helps them master increasingly complex skills and knowledge while reducing cognitive load.

Engaging students in rich learning experiences that help them achieve conceptual understanding and the transfer of knowledge and skills requires scaffolding. Scaffolds are the structures and practices that provide students with the guidance that allows them to more readily master a task that is just beyond their current skill set or knowledge base.

Creating motivating tasks. Designing motivating tasks is the first step in scaffolding for success. When faced with a task, learners implicitly ask these questions as they decide whether they will take it on: "What am I being asked to do?" "Am I capable of tackling this task?" "Is this task meaningful to me?" "Does this have a purpose to me beyond school?" "What supports are available to me to wrestle with this task?" and "Do I feel safe in attempting to wrestle with this task?"[6] When teachers work to make learning tasks relevant and clear and to make supports for learning transparent, they are enabling students to take the first step in the learning process.

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Structuring performance. For a given task, students will need varying kinds of scaffolds that structure their work, depending on their prior experiences. So, for example, when writing a story, some students may benefit from sentence starters and hints about what happens in the beginning, middle, and end of the story, perhaps first told by drawing pictures. Others may understand the story structure and be ready for scaffolds to develop more complex sentences about how events in the story relate to each other in terms of sequence or cause and effect. At the end of the process, all children can complete the task in a way that advances their understanding and skills.

Well-designed and implemented scaffolds can provide the necessary supports that help students make meaning of what they are experiencing and propel learning and development forward. Implementing these supports well also involves communicating reassurance, helping students understand the habits of mind necessary to become proficient, and helping students understand the task's relevance and how their personal trajectory toward competence could unfold.[7]

Using formative assessments. Targeted scaffolds for learning can be identified by teachers' close observations of students' work and by assessments that help pinpoint student thinking and performance relative to learning progressions and provide actionable guidance over time for how

to move students along. These assessment tools and practices answer the key question, "Where are students now?" and provide the insights needed to enable effective support. These types of assessments are carried out as part of the instructional process for the purpose of adapting instruction and improving learning. Instead of focusing on if students indicate right or wrong answers, these assessments are designed to shed light on strategies for next steps that support ongoing improvement. Tools like the Balanced Assessment in Mathematics, the Developmental Reading Assessment, the Desired Results Developmental Profile, and The Fountas & Pinnell Literacy Continuum provide rich information for teachers about students' thinking and performance that they can use to determine next steps in the learning process.

Providing tools. Teachers can also support student learning by providing strategies and tools that reduce cognitive load, freeing up more of the mind's attention and working memory for higher-order thinking and problem-solving. Teachers can focus on big ideas and reduce expectations for memorization by providing easy ways for students to access information when they need it (e.g., notes, calculators, dictionaries, classroom posters, digital search tools). Teachers can chunk tasks by creating smaller steps that build knowledge toward larger accomplishments, rather than overwhelming students with too much new material at once. They can also give students opportunities to practice skills so that they become automatic, freeing up bandwidth for new material and more complex applications.

In the elementary classroom we visited earlier, the teacher, Ted, had worked with students to create many memory assists that were posted all over the classroom, including posters illustrating fractions problems the classroom had tackled and solved, a classroom constitution with shared norms, the definitions of figurative language, protocols that supported reading and writing activities, and other guidelines to support recall. These were often written in the students' own words, codifying their learning so they could share it and go back to it as needed. All of these helped reduce cognitive load and supported student independence and confidence in building on their prior learning to tackle the complex learning they were undertaking.

Furthermore, assistive technologies such as audiobooks, electronic readers that can adjust the size and type of font, recording tools, dictation strategies, and other supports can help students with particular kinds of learning differences become successful in managing their learning and developing their abilities, rather than suffering from deficit frameworks that limit the advances they can make.

Supporting multiple ways to understand. Similarly, deeper learning is supported by techniques that provide ways to elaborate on and differently understand a concept, such as self-explanation and peer teaching. Asking students to explain and summarize ideas they have read aloud—or to teach concepts or skills to others—has been found to deepen their understanding and increase their achievement, as does asking them to represent information in multiple modalities. In mathematics, for example, asking students to represent quantitative information in multiple forms, such as with graphs and verbal explanations, can support robust understanding. Asking students to integrate abstract concepts and concrete examples into their explanations can deepen their comprehension while simultaneously providing richer data to teachers for assessment.

Another way schools can support students in deeply understanding ideas is to teach thematically in ways that help students see the connections among ideas and events across time, space, and disciplines and that provide students with many ways to explore, understand, and demonstrate

their learning. For example, 10th-graders at Social Justice Humanitas Academy, a community school near Los Angeles, spend the first semester of their humanities class learning about various social movements, including the United Farm Workers movement, LGBTQ rights, and the #MeToo movement, among others. After exploring the varied dimensions of these movements, students write an essay and, in groups, create a play based on one of the movements. In doing so, students encounter the ideas of these movements and of social change from multiple perspectives while they use concepts and skills that they have learned in different classes and demonstrate what they've learned in different ways, using their research and writing skills, creativity, ability to perform, and ability to work in groups with their peers.

Developing Effective Inquiry-Based Learning

Inquiry-based approaches to learning enable students to take an active role in building knowledge and "learning to learn" by managing their own learning process.

Curriculum designs and instructional strategies can optimize learning by building on each student's prior knowledge and experiences, connecting those experiences to the big ideas or schema of a discipline, and designing tasks that are engaging and relevant so that they spark students' interests. A powerful way this is enabled is through inquiry-based learning, which requires students to take an active role in constructing knowledge as they work to solve a problem or probe a question. Inquiry may take place in a single day's lesson or a long-term project, centered on a question or problem that requires conjecture, investigation, and analysis, using tools like research or modeling. The key is that—rather than just receiving and memorizing pieces of information that do not "stick"—inquiry provokes active learning and student agency through questioning, consideration of possibilities and alternatives, and application of knowledge.

The key is that—rather than just receiving and memorizing pieces of information that do not "stick"—inquiry provokes active learning and student agency through questioning, consideration of possibilities and alternatives, and application of knowledge.

In addition, providing opportunities for students to set goals and to assess their own work and that of their peers—often using rubrics that describe the dimensions of high-quality work and presentations that allow for deeper questioning and exchange—can encourage students to become increasingly self-aware, confident, and independent learners. Such strategies can challenge and support students to perform at the edge of their current abilities; help them transfer knowledge and skills to new content areas; and, ultimately, improve achievement.

Project-based learning is one form of inquiry learning that develops students' knowledge and skills while they investigate meaningful problems or answer a complex question. Projects often center on real-world issues. They may incorporate interdisciplinary and standards-based tasks related to scientific or historical inquiry, close reading, extensive writing, and quantitative modeling and reasoning. They also often require that students present their work publicly.[8]

Components of successful project-based models include the use of strategic scaffolds to support learning—including clear steps that are checked along the way and rubrics that define the

dimensions of high-quality work, structures for group work to ensure equal levels of participation, student choice that develops students' ownership over the content and work, and explicit instruction and access to resources at critical junctures in the process.[9]

Authentic, Community-Connected, Project-Based Learning at Oakland High School

An example of project-based learning in action can be seen at Oakland High School, where teachers designed an authentic project on safety issues related to commuting to school—a community challenge students had identified. Students addressed the question: How can we improve the journey to school for teachers and students? Their client was the City of Oakland Department of Transportation. They also worked with a community partner, Y-PLAN, a local initiative out of University of California, Berkeley's Center for Cities and Schools. Students researched solutions to the logistical challenge of getting 1,600 people on and off campus safely every day. This required them to observe the many challenges in the areas around campus; conduct interviews; and develop, administer, and analyze a community survey.

After schools were physically closed in March 2020 due to the COVID-19 pandemic, students met virtually in teams to complete their research and to identify solutions, supported by teachers through Zoom sessions and telephone calls. At the end of the year, nearly 30 students made a virtual presentation, "A Competent, Convenient Commute (CCC)," to members of the Oakland Department of Transportation, Berkeley SafeTREC (the Safe Transportation Research and Education Center), Y-PLAN, and Oakland High School's staff, in which they advocated for curb striping, crosswalk lights on the road, and pedestrian islands.

In the course of this project, students learned to identify and frame problems and questions; conduct research; evaluate evidence; develop arguments; explain and defend their thinking; communicate clearly in writing as well as orally, quantitatively, and graphically; plan a complex project; receive and incorporate feedback; revise their work; seek out resources; and overcome obstacles. The performance tasks supported these cognitive skills as well as extending and authenticating core academic activities. Students were motivated to persevere even in the face of school closures because the task was meaningful and relevant to them and could make a difference in their communities. They were also motivated because they were supported in learning the components of the task and revising it to meet a high standard of excellence.

Source: Adapted from Choi, Y. W. (2020). *The equity imperative: Project-based distance learning*. Next Generation Learning Challenges.

The success of well-designed and well-managed project-based curricula has been documented across many schools and experimental interventions. Typically, studies find that students exposed to this kind of curriculum do as well as or better than their peers on traditional standardized test measures but significantly better on measures of higher-order thinking skills that transfer to new situations, as well as having stronger motivation, better problem-solving ability, and more positive attitudes toward learning.[10]

Successful approaches are carefully planned and well supported so that students in fact learn, rather than wandering aimlessly through discoveries that confuse rather than enlighten them. Key supports include clearly defining the learning task; providing prompts, scaffolds, informational

resources, and explanations to support aspects of the task; and making task progress and learning visible to the learners through check-ins and ongoing assessment. Students have repeated exposure to key concepts and opportunities for feedback that take them to the next stages of learning. Teachers provide direct instruction at critical junctures, offering explanations or directing students to resources that are crafted and timed to support inquiry.

In addition, well-designed inquiry learning supports the development of executive function and metacognitive skills that help students "learn to learn" throughout their lives. Project-based learning, for example, requires students to learn to set goals, plan and manage time and resources, figure out a learning process, evaluate their own progress, and reflect on and revise their work. A substantial body of research has found that students who employ metacognitive strategies, including self-regulated learning and goal setting, are better able to engage in cognitive processes, remember information, and maximize learning.[11] In the course of guiding inquiry, educators can help students develop these skills through modeling of thinking, explicit strategy instruction, scaffolds for self-monitoring of thinking and actions, and regular opportunities for student self- and peer assessment.

Performance assessments are often a key element of inquiry-based tasks. Such assessments require demonstrations of knowledge and skills as they are used in the real world. The on-the-road driver's exam that supplements the multiple-choice test given to would-be drivers is one example of a performance assessment, as is the portfolio that architects submit to become certified. Students are typically asked to apply their knowledge and skills in creating a paper, project, product, presentation, and/or demonstration. These may be assembled and communicated through student portfolios or the systematic collection of student work samples, records of observation, scored papers or products, and other artifacts collected over time to demonstrate growth and achievement.

Performance assessments encourage higher-order thinking, evaluation, synthesis, and deductive and inductive reasoning while requiring students to demonstrate understanding.[12] Furthermore, performance assessments can provide multiple entry points for diverse learners, including English learners and students with special needs, to access content and display learning.[13] The assessments themselves are learning tools that also build students' co-cognitive skills, such as planning, organizing, and other aspects of executive functioning; resilience and perseverance in the face of challenges; and a growth mindset that grows from the ongoing process of fine-tuning and improving the product. A growing number of schools and districts organize high school work around a portfolio of performance tasks that are assembled and exhibited to demonstrate the competencies they expect graduates to have developed.[14]

Performance assessments encourage higher-order thinking, evaluation, synthesis, and deductive and inductive reasoning while requiring students to demonstrate understanding.

Senior Defense at Pasadena Unified School District

A row of desks is lined up facing the front of a classroom, where a projector is queued up. The desks are occupied by a judging panel, among them the school librarian and two other educators from a high school in Pasadena Unified. The panelists wrap up their discussion of the student presentation they have just observed, and then the school librarian steps outside to call in the next student, Maria, who is ready and waiting in the hallway.

Maria enters the classroom dressed professionally and stands poised in front of the panelists despite her slight nervousness. She is here to present her senior defense, a culminating event of her high school education, and her professionalism signals how seriously she takes the experience. She begins by introducing herself and sharing her educational journey as an immigrant from Peru who did not speak English when she arrived in the United States at the age of 5.

After introducing herself, Maria presents her first artifact—a research paper she wrote on the topic of "designer babies," a genetic concept that touches on both science and ethics. She reflects on the content of her research and what the process taught her about her own identity as a learner, noting that the assignment taught her how to "search deeper" in her thinking. Throughout her presentation, she maintains strong eye contact with the panelists, gesticulates to help communicate her points, and displays a strong grasp of her research topic.

Next, Maria presents her second and third artifacts—a reflection on her experiences volunteering at a local Ronald McDonald House with a group of her peers, and an original dance she choreographed with a group of her peers for a school basketball game. Throughout her reflections, she shares how these artifacts helped her cultivate the district's graduation competencies of collaboration and creativity and develop the sort of leadership that has allowed her to take greater ownership in projects in her academic coursework. To conclude her presentation, Maria shares her plans for the future: to stay involved in her community and to study psychology at a 4-year college to learn "why people talk and think the way they do." She shares, "All of this, and my artifacts, show that I am ready to graduate.... I've gone through those struggles and learned how to conquer them. I can take them into college. College is not an easy path to go in. [My high school] has taught me how to not give up."

After Maria concludes her presentation, the panelists begin their question-and-answer session, during which Maria continues to demonstrate great mastery over the district's graduation competencies: research, collaboration, and creativity. When one panelist asks Maria which experiences have helped her develop as such an effective speaker, she adds a personal reflection, saying, "I used to be shy—the girl in the back. I feel like keeping my voice shut and not getting it out there made me belittle myself. I had to learn how to put myself out there. I want to study psych[ology] and help people with suicide problems. If I don't have communication skills, how am I going to help them?" After the panelists run through their questions for Maria, they ask her to step outside while they deliberate on her score.

Each of the panelists shares that they believe she has clearly demonstrated proficiency in each of the district's competencies, highlighting how thoughtful she was in reflecting on her own growth. There are four districtwide rubrics, each aligned to a key competency area: (1) a Research Rubric that evaluates the student's paper in terms of argument, citation of sources, evidence presented, organization, and language; (2) a Creativity/Innovation Rubric that evaluates point of view, originality, value, style, and reflection; (3) a Written Communication/Reflection Rubric that evaluates evidence of the student's metacognition/growth, connections made, analysis, organization, and language use;

and (4) an Oral Communication/Presentation Rubric that evaluates the student's explanation of ideas and information (through a reflective lens), organization, eyes and body (i.e., eye contact with the audience), voice (i.e., speaking clearly), presentation aids, and response to audience questions.

After identifying "wow" areas (i.e., strengths) and "wonder" areas (i.e., opportunities for growth) to share with Maria, the judging panel invites her back in to share the good news that she has passed her senior defense with distinction. Maria breathes a sigh of relief and walks out of the room one step closer to her high school graduation.

Source: Adapted from Adams, J., & Kaul, M. (2020). *Using performance assessments to support student learning in Pasadena Unified School District*. Learning Policy Institute.

The several performance assessments presented and discussed in Maria's senior defense were all shaped and fine-tuned over multiple iterations to achieve a standard of quality and to enable her to present with deep understanding. A long line of research shows that expert performance is related to opportunities for deliberate practice, which is coached through the provision of immediate feedback for a performance, opportunities to evaluate and problem-solve, and repeated attempts to refine the behavior or skill.[15] As individuals become more expert, they can self-evaluate and identify strategies for improvement with less outside feedback. Opportunities for regular revision also help students develop a sense of confidence and competence as they see the improvements in their work, as well as a growth mindset they can carry into other contexts.

For deliberate practice and revision to occur, feedback should take place during the learning process, not at the end when teaching on that topic is finished, and teacher and students should have a shared understanding that the purpose of feedback is to facilitate learning. The quality of the feedback is key to its effects. Neither nonspecific praise nor negative comments support learning. Instead, gains occur when feedback focuses on features of the task and emphasizes the next steps needed to better achieve learning goals. Given that teachers cannot frequently meet one-on-one with each student, classroom practices should allow for students to display their thinking so the teacher will be aware of it and to learn to become increasingly effective critics of their own and each other's work as they use rubrics and other tools to engage in self- and peer assessment.

Rubrics allow performance to be judged in relation to well-defined criteria so that feedback focuses on particular qualities of a student's work and provides guidance about what to do to improve, along with immediate opportunities to apply the feedback. This approach to feedback fosters a mastery orientation that enables students not only to develop an understanding of the content and improve their skills, but also to recognize meaningfulness in the work itself. Furthermore, students' sense of agency and motivation are enhanced when they can strive for and demonstrate improvement.

Revision of work is a critical aspect of the learning process, supporting reflection and metacognition about how to approach future learning. Unless students have opportunities to incorporate the feedback as they revise their work or performance (e.g., rework math problems; retry jump shots or musical efforts; reread a tough passage; rewrite sentences, paragraphs, and essays; retake tests; and revamp products), they cannot benefit optimally from the feedback that teachers or their peers often take considerable time and effort to produce. When students have the chance to evaluate their own and others' work using clear standards, it also helps them internalize the standards and become more self-directed in their own learning. The process of critique and revision used with projects that are called "learning exhibitions" at the Conservatory Lab Charter School in Boston, MA, illustrates how this is done.

Learning Expeditions at Conservatory Lab Charter School

At Conservatory Lab Charter School, Jenna Gampel's 2nd-grade class conducts research on snakes for a study called "Don't Be Scared: The Truth About Snakes." The learning expedition begins with a case study in which students work collaboratively and receive guidance to investigate multiple sources of evidence. This helps students build skills they will need in the second half of the expedition, when they will conduct independent research on a unique snake and author their own page in the class project. After this initial case study, students are ready to begin their own research across the same categories that were discussed during the case study, working individually and applying their knowledge and skills as researchers.

Feedback is a key component to get high-quality work from students. Supporting students to produce their best work involves a process of critique and revision. They begin thinking about drawings of their snakes by looking at work done by students from previous years. They use critique norms, such as "be kind, specific, and helpful," to analyze the drawings and identify what features are done well and what could be improved. After students practice providing feedback on previous examples, they begin critiquing each other's work. This process equips students with the skills to look carefully at work like scientists and strengthens their ability to offer feedback by using rubrics to evaluate each other's work.

Engaging students in an iterative process of feedback and revision empowers them to take ownership of their work and do the kind of thinking that researchers and professionals do. As the teacher mentions, "Getting kids to do their best work is what learning expeditions are all about. It's not just about doing it when we're doing our high-quality artwork. We take the same process, [and] then we can apply it to the way we craft the written stories."

This process in action is documented across a six-part video series from EL Education.

Source: Adapted from EL Education. (2013). Inspiring excellence [Video series].

Culturally Responsive Pedagogy

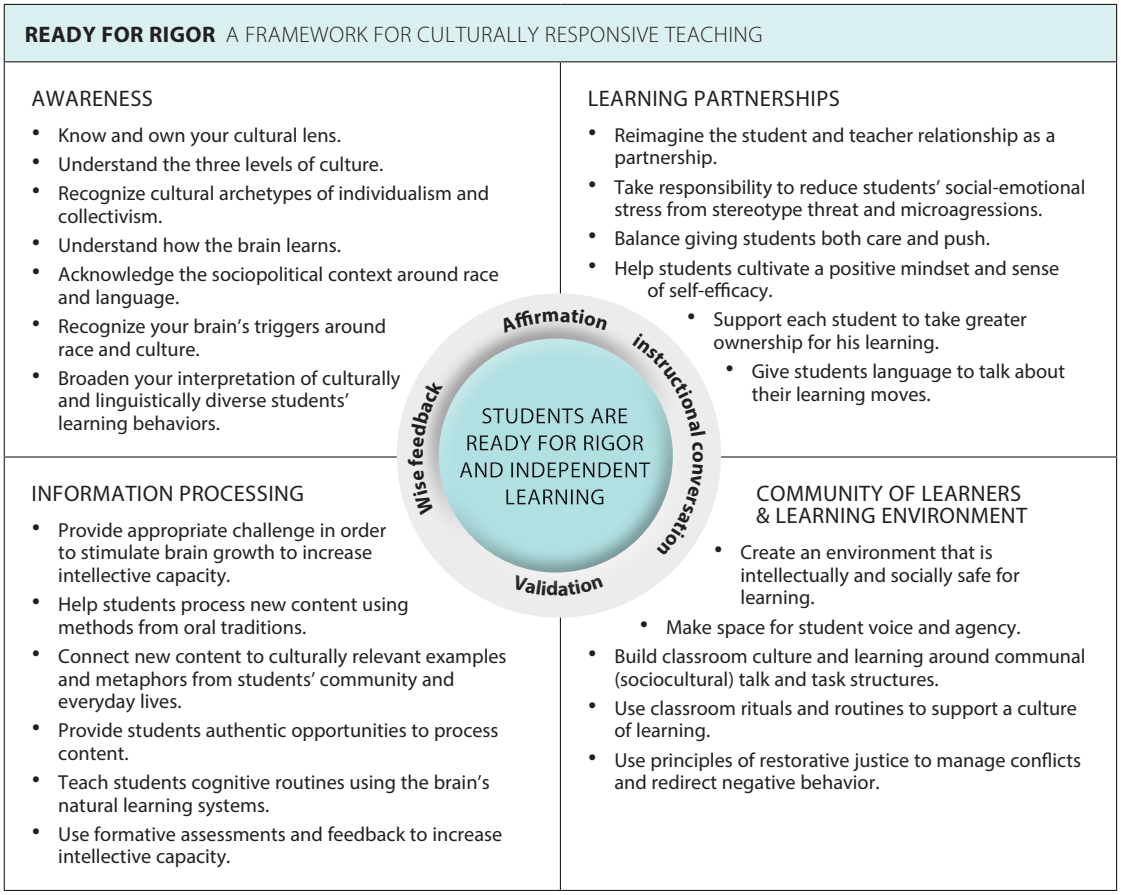
Culturally responsive curricula and teaching build on and validate students' diverse experiences to support learning, engagement, and identity development.

The practices we have described are most successful when students are in a safe environment and can see the connections to their own lives and experiences, which allows them to develop cognitive strategies and take greater agency over their learning. Culturally responsive learning environments celebrate the unique identities of all students while building on their diverse experiences to support rich and inclusive learning.[16] This asset-based orientation rejects the idea that practitioners should be colorblind or ignore cultural differences. Instead, culturally responsive educators place students at the center by inviting their multifaceted identities and backgrounds into the classroom to inform curriculum design, instruction, and learning structures.[17]

In her book *Culturally Responsive Teaching and the Brain*,[18] Zaretta Hammond describes the goal of culturally responsive practices as getting students "ready for rigor." (See Figure 4.2.) Her four strategies map closely onto the principles described in this playbook:

1. **Educator awareness** of how the brain learns, of culture and context, and of students' learning behaviors;
2. **Learning partnerships** that cultivate positive mindsets, self-efficacy, and students' ownership of learning and understanding of their own learning processes, while reducing stereotype threats in the classroom;
3. **Communities of learners in a supportive learning environment** that is intellectually and socially safe, collaborative, focused on learning, and restorative; and
4. **Information processing** supported through authentic, culturally connected tasks that build on students' experiences and offer the right amount of challenge for what students are ready to do next, reducing cognitive load, and providing ongoing formative feedback and support.

Figure 4.2
Ready for Rigor: A Framework for Culturally Responsive Teaching



Source: Hammond, Z. (2015). *Culturally Responsive Teaching and the Brain*. Corwin Press.

Culturally responsive practitioners recognize the importance of infusing students' experiences into all aspects of learning.[19] Doing so enables educators to be responsive to learners—both by validating and reflecting the diverse backgrounds and experiences young people bring and also by building upon their unique knowledge and schema to propel learning and critical thinking. Educators can also develop a culturally sustaining pedagogy by working to foster and nurture linguistic, literate, and cultural pluralism and equality.[20] This creates a context of belonging for students that can counteract the deficit approaches to teaching and learning many students have experienced in contexts that have sought to minimize, penalize, or eradicate languages, literacies, and cultural ways of being that do not adhere to White, middle-class norms.

As culturally responsive, sustaining, and affirming pedagogical approaches center and celebrate diversity, they further belonging and inclusion[21] and positively affect educational outcomes, including engagement in learning, racial identity development, and academic achievement.[22] Furthermore, students from all backgrounds benefit from inclusive learning environments that honor and celebrate diversity. These settings can not only help all young people learn and embrace the diverse backgrounds and cultures that make up the fabric of U.S. democracy, but also cultivate their awareness and orientations toward issues of injustice.

Cultural responsiveness in learning settings can be cultivated by learning about students and the community through curriculum and instruction strategies that both surface and build on that knowledge. This includes **practices for learning about and from students and their communities**. To become a culturally responsive educator, a practitioner must find ways to know students well. This includes learning what students already know, in what areas they already demonstrate competence, and how they can bring that knowledge into the classroom context. (See "Positive Developmental Relationships" and "Environments Filled With Safety and Belonging" for descriptions of many strategies educators use to learn about students, ranging from home visits, to conversations with parents and students, to community walks, to journaling, surveys, classroom meetings, and community circles.)

Educators can learn about students' strengths, interests, and concerns by providing opportunities for student voice and agency in the curriculum.

Educators can learn about students' strengths, interests, and concerns by providing opportunities for student voice and agency in the curriculum, including opportunities for students to talk and write about what they have experienced, know, think, care about, can do, and aspire to. Some schools do this in part through identity exploration and pursuit of community issues from a social justice perspective. These strategies teach educators about their students while allowing students to take ownership of the learning process and develop the critical thinking that enables them to challenge the status quo.

For example, at Social Justice Humanitas Academy (SJ Humanitas) near Los Angeles, students do just this by engaging in projects that help them learn concepts through the lens of their personal identities. For example, in a 9th-grade ethnic studies course, students spend time analyzing their personal histories. One SJ Humanitas teacher explained that the project allows students to move into later grades having "already looked at their history and their past, and the way that they see the world, and how [they can] become better for it."[23] Not incidentally, this project, like a similar

autobiography in the 9th-grade humanities class at East Palo Alto Academy, teaches writing, reflection, and revision skills while teaching educators about their students in profound ways that can be built on throughout high school.[24] In a related SJ Humanitas assignment, students read the memoir *Always Running* by Luis Rodriguez, in which the author recounts his experience as a young Chicano gang member surviving the dangerous streets of East Los Angeles. Students are asked to reflect on and write an essay about how the author overcame adversity and setbacks and achieved self-actualization (a core value at SJ Humanitas that guides students' own reflections).

Another approach to enlisting student voice and agency is referred to as reality pedagogy, in which students take ownership of their learning by co-teaching each other and build from their cultural and homelife contexts by sharing and examining relevant artifacts. Teachers learn alongside students and engage them in co-designing the learning process, acknowledging their own limitations with academic content. This approach creates community, shared experience, and common knowledge among members of the classroom about one another and the communities they live in as it enables students to become responsible for their own learning, as well as one another, valuing and leveraging their different identities.[25]

Educators and students alike can learn in culturally responsive ways by engaging in community-based projects that ask them to critically analyze issues within their communities and take action to impact change.[26] These projects are often launched by posing an essential question or equity-focused problem to students or by asking students to identify issues impacting them and their communities. Students have an authentic audience and purpose for their work, as we saw in Oakland High School's collaborative project to improve safety associated with commuting to and from school.

Similarly, students at the UCLA Community School engaged in an interdisciplinary project as they transitioned to virtual schooling in response to COVID-19. This unit asked students to investigate the issues affecting their community in a 10-week inquiry process in which they sought to understand the disparate impact of the pandemic on communities of color and the responses of local students, teachers, and parents who have organized to work for justice in and beyond schools. After reading articles and reviewing current data and the latest research on the virus, students reported on how these issues were affecting them, their families, and their communities. Students were eager to participate because they were learning something they deeply cared about and could use to improve their own lives and those of their loved ones.

Ensuring that young people have rich learning experiences also requires **culturally responsive content and materials** that:

- reflect and respect the legitimacy of different cultures;
- empower students to value all cultures, not just their own;
- incorporate cultural information into the heart of the curriculum, instead of simply adding on at the margins; and
- relate new information to students' life experiences.

Adopting culturally responsive curricula requires that practitioners acknowledge that what is taught in schools is not neutral; rather, curricula has the potential to either perpetuate or disrupt patterns of inequity and marginalization. With this understanding, educators can design and adopt programs that confront inequities resulting from discriminatory practices and policies, particularly those that have been perpetuated along economic, linguistic, and racial lines.[27]

A growing number of states and districts are beginning to offer supports to develop and implement high-quality curricula that are culturally relevant. Chiefs for Change highlights how several districts, such as Baltimore, MD; Palm Beach County, FL; and Philadelphia, PA, were already developing such materials prior to the pandemic, noting research suggesting that a culturally relevant curriculum has been found to increase student attendance, GPA, and course completion.

Using knowledge of students' experiences, culturally responsive pedagogies also build bridges between students' experiences and school content that draw on the familiar to tap into students' prior knowledge and make it explicit to students to scaffold learning. Students often perform complex tasks outside of school that are not always displayed in school-type tasks. Additionally, their displays might not be recognized as demonstrating competence according to normative standards that dominate many classrooms.[28] For example, calculations used on the basketball court may not initially carry into the mathematics class unless teachers are alert to support the transfer by building on this kind of real-world knowledge.

Using knowledge of students' experiences, culturally responsive pedagogies also build bridges between students' experiences and school content that draw on the familiar to tap into students' prior knowledge and make it explicit to students to scaffold learning.

One study demonstrated how educators can illustrate symbolic meanings in literature by beginning with rap songs and texts the students know and carrying their insights into study of more formal canonic texts.[29] Similarly, a study of the outcomes of inquiry-based instructional practices in mathematics classrooms serving students from low-income families found that linguistic, ethnic, and class inequalities were reduced when teachers contextualized problems and made them relevant to students' lives, introducing new concepts through discussion and asking students to explain and discuss their thinking.[30] These teachers achieved stronger outcomes by seeking to understand and support students' thinking and inquiry in the context of rich, collaborative learning experiences, rather than narrowing the curriculum to rote-oriented algorithms, as often happens for students who have had less prior experience with the content.

Summary

To facilitate deep understanding and transfer of knowledge so that it can be used in new situations, teachers can combine explicit instruction with guided inquiry that allows students to engage in problem-solving in real-world contexts and can promote agency and metacognitive skills by asking students to evaluate, analyze, and create ideas, products, and solutions. By offering feedback along with self- and peer assessment throughout the learning process, and by encouraging students to revise their work, teachers can help students internalize standards and perceive evidence of their growing competence that supports a growth mindset. Providing opportunities for revision along with timely, constructive feedback on a regular basis encourages a mastery-oriented approach to learning. Combined with a learning environment that scaffolds learning, supports individual needs, and teaches in culturally responsive and affirming ways, this kind of teaching promotes students' sense of belonging, self-confidence, and agency and ownership over their work, which in turn fosters motivation. Together, these approaches can help all students become self-sufficient and capable learners.

Where to Go for More Resources

Universal Design for Learning

- UDL at a Glance Video Series and Guidelines (CAST): This video series explains the Universal Design for Learning framework and how educators can use it to create instructional goals, assessments, methods, and materials that meet student needs. It points to concrete strategies to guide the implementation of a Universal Design for Learning framework in any learning environment and is accompanied by FAQs and additional resources.
- Lesson Planning With Universal Design for Learning (Understood For All): This step-by-step guide is designed to help educators create lessons that meet the needs of all students. It offers guidance on how to proactively reflect on, design, and implement lessons.
- Assistive Technology for Learning: What You Need to Know (Understood For All): This web resource explains what assistive technology is and how it can help youth overcome learning challenges. It also provides examples of the various types of tools that can be used in different content areas and with different age groups.

Scaffolding for success

- How Learning Happens (Edutopia): This video series illustrates strategies that enact the science of learning and development in schools and other learning settings. It includes several video series on various topics, such as fostering positive relationships, cultivating a belonging mindset, developing foundational skills and academic confidence, establishing positive conditions for learning, and learning beyond the school day.
- Differentiating Instruction: Finding Manageable Ways to Meet Individual Needs (ASCD): This resource describes various differentiation strategies, such as stations, flexible grouping, and tiered activities, that educators can use to support individualized learning in both elementary and secondary classrooms.
- Planning Differentiated, Multicultural Instruction for Secondary Classrooms (Council for Exceptional Children): This article provides an overview of key principles and examples of differentiated instruction, Universal Design for Learning, and multicultural education, as well as a unit planner template to help educators put these components into action.
- Six Scaffolding Strategies to Use With Your Students (Edutopia): This resource describes six scaffolding strategies that practitioners can use to support student learning: (1) show and tell; (2) tap into prior knowledge; (3) provide time to talk; (4) pre-teach vocabulary; (5) use visual aids; and (6) pause, ask questions, pause, review.
- Scaffolding in Education (Education Corner): This resource provides educators with an overview of the benefits of scaffolding and possible implementation challenges. It also describes various scaffolding techniques and tools that practitioners can use to support teaching and learning.
- *Assessing Learning in the Classroom* (National Education Association): This book describes common principles for effective assessment that educators can use to ensure

that assessments inform teaching and improve learning. The authors describe various assessment approaches and their strengths and limitations and supplement these discussions with vignettes of effective classroom assessments in action.

- *Assessing Student Learning by Design: Principles and Practices for Teachers and School Leaders* (Teachers College Press): This book provides educators with guidance on how to use assessments to gather relevant data and promote learning. Through its Assessment Planning Framework, it helps educators match assessments to purpose, goals, and content and provides insights on how assessments can promote student growth and instructional improvement.
- The Informal Formative Assessment Cycle as a Model for Teacher Practice (STEM Teaching Tools, University of Washington Institute for Science and Math Education): This research brief summarizes and illustrates, through examples of informal assessment conversations, the nature of informal formative assessment and its connection to student learning.

Inquiry-based learning

- Project-Based Learning Video Series (Edutopia): This video series describes how project-based learning can have a positive impact on achievement and engagement. It provides an overview of the key features of project-based learning, the skills and mindsets that it nurtures and requires, and the ways it fits in with what we know works for students.
- EL Education: This network supports academic, social and emotional, and character learning across more than 150 schools that serve over 500,000 students. Through its work across the country, EL has created a range of free and open educational resources (e.g., curricula, videos, documents, books, and student work models) that can help educators create inquiry-based learning opportunities that engage learners and build their knowledge, skills, habits, and mindsets.
- PBLWorks: This website provides k–12 educators with resources to design and facilitate high-quality project-based learning. Resources for practitioners to download include project ideas and sample planning forms, rubrics, student handouts, and more.
- Resources and Downloads to Facilitate Inquiry-Based Learning (Edutopia): This webpage helps educators find information, strategies, and tools to promote engagement in inquiry-based learning. It includes downloadable tools and resources used by practitioners at schools with successful inquiry-based practices to help educators see these practices and strategies in action.
- California Performance Assessment Collaborative (CPAC) (Learning Policy Institute): This website provides information, videos, and lessons captured from the educators, policymakers, and researchers in CPAC who are working to study and advance the use of authentic approaches to assessment that require students to demonstrate applied knowledge of content and use of 21st-century skills.
- Performance Assessment Resource Bank (SCALE, SCOPE, and CCSSO): The Performance Assessment Resource Bank is an online collection of performance tasks and resources—collected from educators and organizations across the United States and reviewed by experts in the field—to support the use of performance assessment for meaningful learning.

- Youcubed: This website provides educators with resources to teach math in creative and inquiry-based ways that make it powerful and accessible for all learners. Resources include tasks by grade and topic, a list of key research, and online courses for educators and students.

Culturally responsive pedagogy

- Culturally Responsive Education Hub: This hub provides practitioners with an array of resources to advance culturally responsive education and ethnic studies. These include research studies and briefs; resources for culturally responsive education during remote learning; and a video series that illustrates the impact of culturally responsive education from the perspective of parents, educators, and students.
- Leading Equity Center: The center provides several professional learning opportunities (e.g., interactive webinars, workshops, and coaching) for educators to promote equitable instructional practices in both in-person and virtual learning settings.
- Culturally Responsive Teaching (Edutopia): This webpage provides practitioners with links to articles, resources, and videos that support culturally responsive teaching. The resources cover various topics, including broader discussions of how to advance equity and anti-racism in classrooms at different grade levels as well as guidance on how to adopt and implement a range of discrete culturally responsive teaching practices.
- Beyond "Misconceptions": How to Recognize and Build on Facets of Student Thinking (STEM Teaching Tools, University of Washington Institute for Science and Math Education): This resource presents things to consider; discusses how to attend to equity; and provides recommendations for actions educators can take to be able to recognize, build on, and respond to the range of ideas, or facets of students' thinking, during instruction.

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Development of Skills, Habits, and Mindsets

Developing Habits of Mind and Heart at East Palo Alto Academy

East Palo Alto Academy (EPAA)—a small public high school launched in a low-income community in California once so violence-ridden it was identified as the murder capital of the United States—transformed student outcomes by incorporating practices built on the science of learning and development. In a district where two thirds of students once failed to graduate, the new school enabled 90% of students to graduate and 90% to go on to college by creating the conditions for cognitive, social, and emotional learning.

As in many other new schools, teachers began by identifying the fundamental competencies necessary for success in school and in life and then infusing them into every aspect of the school. The Five Community Habits developed by the staff in the first year—personal responsibility, social responsibility, critical and creative thinking, application of knowledge, and communication—were the basis of rubrics used for guidance and evaluation in every class, every year, by every teacher.

The social, emotional, and cognitive skills, habits, and mindsets incorporated into the rubrics include personal awareness and self-management for attendance, participation, personal honesty, and care for others. They also include interaction and collaboration skills, empathy and perspective-taking, and community building. Executive functions like planning, organizing, and managing projects; metacognitive skills like reflection for self-improvement; and capacities for perseverance exhibited by willingness to revise work are also incorporated into the rubric.

This framework, which guided the development of curriculum and the evaluation of student work, was used to teach students in a consistent and persistent manner what it meant to be a student, a worker, and a member of the EPAA community. Some skills, such as conflict resolution and study skills, were taught in advisory classes, while all were taught, modeled, and reinforced in academic and co-curricular settings. Because students were constantly reflecting on the skills in self-assessments, exhibitions, and student-led conferences, they internalized them deeply. As one student noted, "The [Five Habits] rubric has been the best thing for me over the last 4 years." Because teachers incorporated these skills and habits into content classes as well as advisory classes, students grew to have a thorough understanding of the standards, commonly referenced them, and knew what was needed to meet them. Ericka, a student from the first graduating class, demonstrated her deep understanding of the habit of social responsibility as she reflected at her senior exhibition:

> It was hard for me, because freshman year I was just really a cocky individual. I thought I knew it all; I didn't want to work for anybody else, because I was big-headed. And part of this habit is how well you interact in a group. How well do you work with people who are not like you? If I put you in a group with [two other students], can you work with them? Can you get the job done? How do you move your group forward? … Are you interrupting me every time I'm trying to speak? … I would apply this [to the challenge of] being able to work with people who are not like you, who have different backgrounds from you, who have different viewpoints from you. Being able to tackle that in high school I think [will make it] easier for me to tackle it when I go to college.

Source: Adapted from Darling-Hammond, L. Altamirano, R., Ramos-Beban, N., & Hyler, M. (2016). *Be the Change: Reinventing School for Student Success*. Teachers College Press.

Overview of the Development of Skills, Habits, and Mindsets

This brief glimpse into East Palo Alto Academy illustrates how a school can embed social, emotional, and cognitive skills and habits into an academically rigorous curriculum and empower students to practice these skills with growing independence. When such skills are practiced sufficiently to become habits, they support the development of engaged, productive, and effective learners in ways that transfer to new situations. By integrating these skills in the curriculum throughout the school day and across the 4 years, teachers at East Palo Alto Academy recognized that the development of complex dynamic skills is a progression that cannot occur at a single moment in time or in isolation from other abilities.

The educators at East Palo Alto Academy know that in order for young people to learn and thrive, they need rich opportunities to develop their whole selves. They created a simple framework that all school stakeholders could use to foster important cognitive, affective, and social skills along with domain-specific knowledge. This skill development was nested in an enabling environment full of rich experiences and trusting relationships that empowered students as active agents in their own learning.

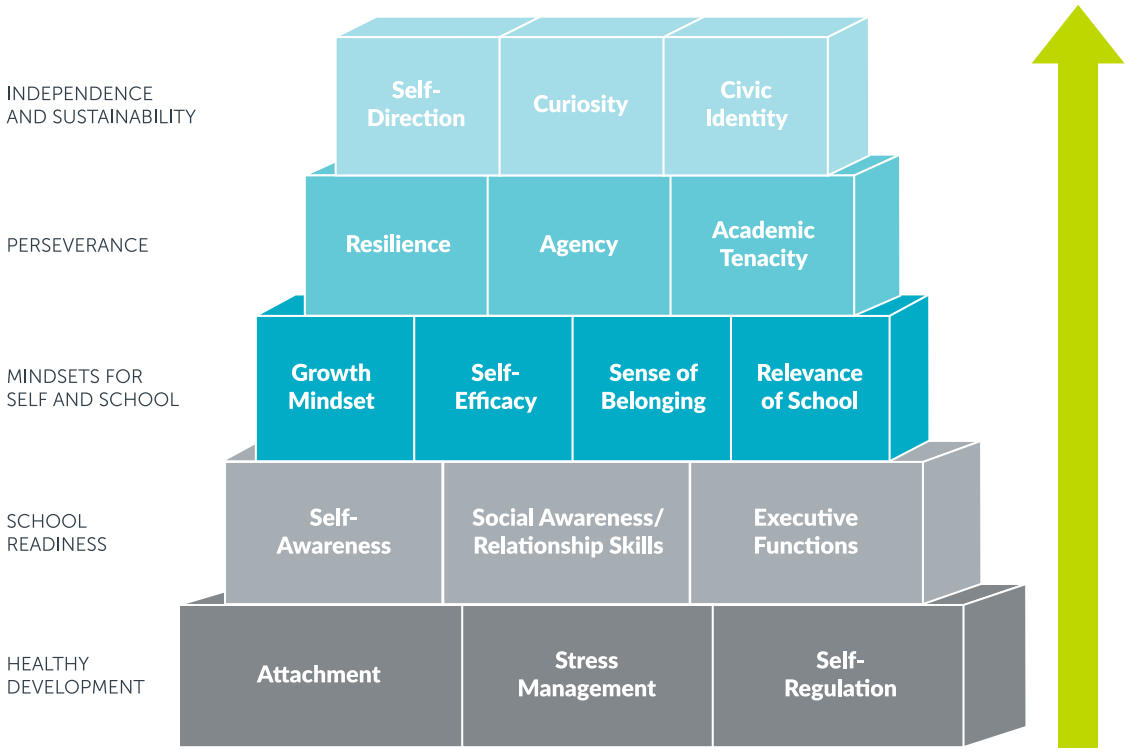
Research across a diverse set of fields confirms that these kinds of skills, along with mindsets that support growth, belonging, and purpose, are critical for success in school and beyond. For example, the emotions young people have while learning affect how deeply they engage with activities and content. Positive emotions, such as a sense of personal value, along with interest and excitement, open up the mind to learning. Negative emotions, such as fear of failure, anxiety, and self-doubt, reduce the capacity of the brain to process information and to learn. It is our emotions that engage us or shut us down, and it is the development of productive skills, habits, and mindsets that substantially drives our emotions.

Turnaround for Children's Building Blocks for Learning framework (see Figure 5.1) offers a comprehensive means for understanding how these skills are related and how they develop. Foundational skills (e.g., self-regulation, executive functions, self- and social awareness, and stress management) and mindsets (e.g., growth mindset, self-efficacy, and sense of belonging) lay the groundwork for higher-order skills and mindsets (e.g., agency, academic tenacity, curiosity, etc.). The framework acknowledges that instructional and contextual factors of classrooms substantially influence student outcomes. Students do not always have the same start in life or follow a smooth path through it, but through sustained and supportive relationships and personalized experiences, all students have the potential to succeed as learners.

Why Developing Skills, Habits, and Mindsets Is Important: What the Science Says

Learning is social, emotional, cognitive, and academic. How does any student become a productive learner? What skills must they have? The science tells us that learning is integrated: There are not separate parts of the brain that support academic skills and social skills, for example. The parts of the brain are cross-wired and functionally interconnected. For students to become engaged, effective learners, educators need to simultaneously develop content-specific knowledge and skills along with cognitive, emotional, and social skills. These skills, including executive functions, growth mindset, social awareness, resilience and perseverance, metacognition, curiosity, and self-direction, are malleable: They are not "hardwired" but develop in response to experience. All are correlated with achievement, and all can be taught, modeled, and practiced just like traditional academic skills.

Figure 5.1
Building Blocks for Learning



Source: Stafford-Brizard, K. B. (2016). *Building blocks for learning: A framework for comprehensive student development*. Turnaround for Children. http://www.turnaroundusa.org/wp-content/uploads/2016/03/Turnaround-for-Children-Building-Blocks-for-Learningx-2.pdf.

Social, emotional, and cognitive skills are interrelated and develop as a progression. Cognitive skills like self-regulation, executive functions, and problem-solving interact with emotional skills, such as empathy, emotion recognition, and regulation, and with social skills, including cooperation and communication. These interacting skills develop progressively, but not as a fixed, linear sequence: As with other skills, there are bursts and plateaus. Higher-order skills and abilities, when present, are a combination of foundational social, emotional, cognitive, and academic skill development. When teachers understand that these skills progress in concert with one another, they can design learning experiences that simultaneously build diverse learning skills, supporting engagement and effort instead of singularly focusing on facts and procedures in a given area without attending to social and emotional considerations.

Learning of these skills is influenced by relationships and experiences. Learning is highly context sensitive. A child's skill and mindset development relies on an ongoing, dynamic interconnectedness between biology and environment, including relationships and cultural and contextual influences, resulting in significant variation within and across individuals over time. This contrasts with the idea of universal, fixed steps or stages of development. The norm is diverse developmental pathways—not missed opportunities, but rather multiple opportunities to develop

new skills and/or catch up. Because each student's development is nonlinear, with its own unique pathways and pacing that are highly responsive to positive contextual influences and support, the unique challenge of schools is to design personalized, supportive developmental learning experiences for all children, no matter their starting point.

This extends to the development of social, emotional, and cognitive skills, which should be taught throughout childhood and adolescence and may need particular attention when students face chronic, unbuffered stress due to adversity or oppression. In these cases, the development of foundational skills and mindsets, including self-regulation, stress management, and executive function, are at risk. These skills are exquisitely sensitive to the hormone cortisol.

The primary energy source for the wiring of the brain is human connection; the neurochemicals and hormones that are released through human relationships are the fuel causing neurons to fire and connect. As Hebb's Law states, "Neurons that fire together, wire together." The brain gets increasingly wired, and as it does, we become able to do increasingly complex things, whether it is reading, riding a bike, or gaining resilience. In his 1984 2 Sigma study, Benjamin Bloom demonstrated that building highly favorable conditions into the environments in which children grow and learn steeply improves equity of experience and opportunity.[1] His proxy for highly favorable conditions was an individual tutor. He found that the experience of individual tutoring could take a student performing at the 50th percentile and move their performance up by two standard deviations to the 98th percentile. When he studied his data, he realized that the active ingredient that generated the outcomes he got was access to both the content and the adult–student interaction—the relationship.

What Can Schools Do to Develop Skills, Habits, and Mindsets?

For students to become engaged, effective learners, educators need to simultaneously develop cognitive, social, and emotional skills along with content knowledge and related academic skills. The development of these skills is also a prerequisite for creating an equitable school environment.

For students to become engaged, effective learners, educators need to simultaneously develop cognitive, social, and emotional skills along with content knowledge and related academic skills.

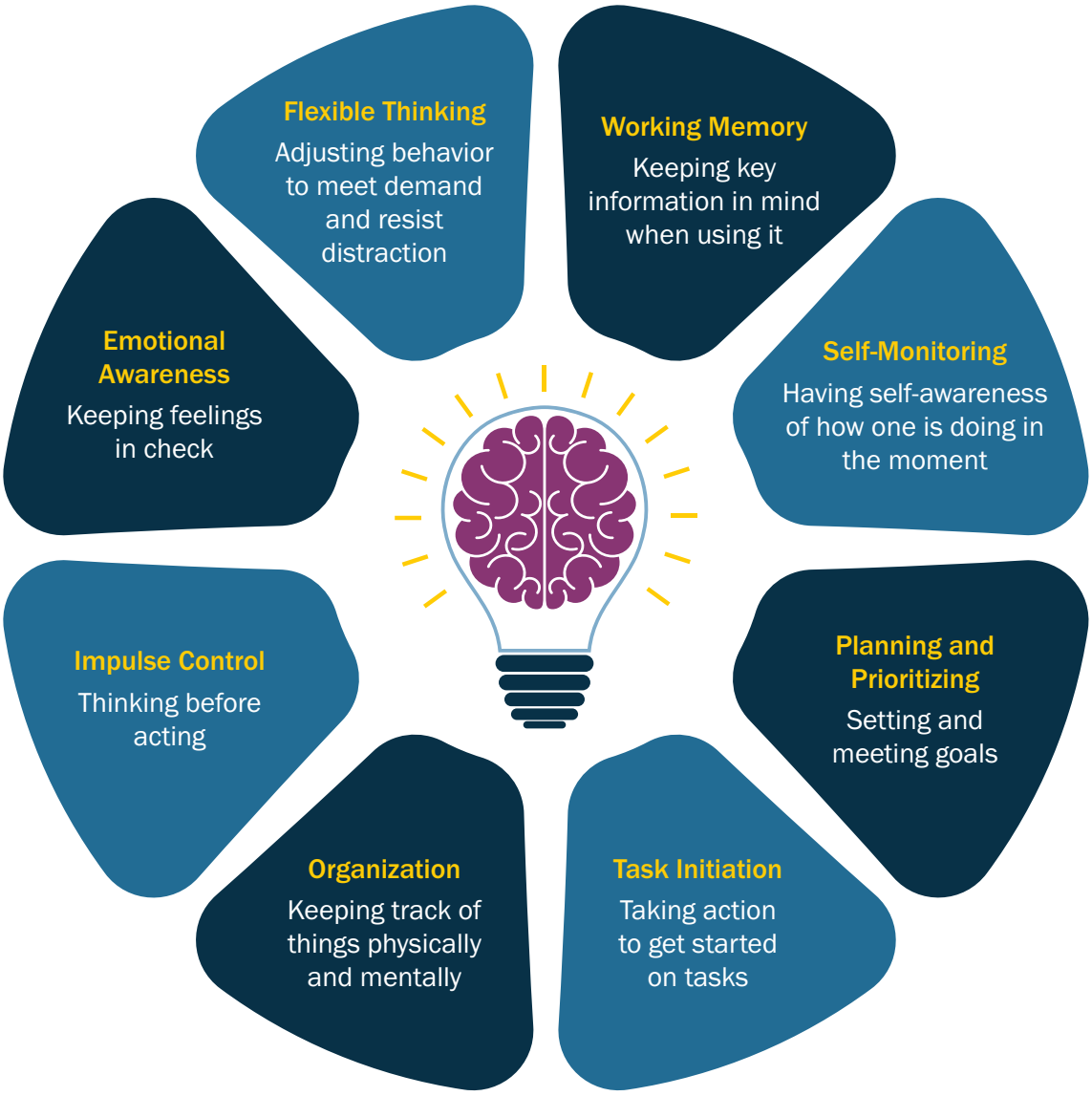
Many schools are now familiar with what is called social and emotional learning (SEL), as many programs have emerged to help teach these skills. The Collaborative for Academic, Social, and Emotional Learning (CASEL) provides one helpful framework for understanding the skills, habits, and mindsets that further social and emotional development. It also offers research on the effectiveness of different approaches and programs, including self-awareness, self-management, social awareness, interpersonal skills, and responsible decision-making. (See Figure 5.2.)

Figure 5.2
CASEL's SEL Framework

Source: Collaborative for Social and Emotional Learning. (2020). *CASEL'S SEL framework: What are the core competence areas and where are they promoted?* https://casel.org/wp-content/uploads/2020/12/CASEL-SEL-Framework-11.2020.pdf.

In addition, it is equally important to attend to the cognitive skills that are important for academic success and development. Key among these are those related to executive function, which help learners attend to tasks, plan their work, problem-solve in the face of emerging challenges, and manage themselves in the learning process. These skills include the abilities to monitor and regulate one's own actions; to organize, prioritize, and activate efforts in order to accomplish tasks; to focus, sustain, and shift attention and alertness as needed to attain goals; and to manage frustration and redirect efforts when needed. (See Figure 5.3.) The skills that are critical to success in school and in life are often assumed, rather than explicitly taught, and need an equally explicit curricular approach.

Figure 5.3
Executive Function and the Abilities It Supports



Source: Adapted from ADDvantages Learning Center. (2021). *Executive functioning: Brain training for those with executive functioning skills deficit.* https://addvantageslearningcenter.com/executive-functioning/.

These areas of learning need to be planned for and integrated across curriculum areas and across all settings in the school. To achieve these aims, schools can incorporate the following structures and practices to develop learners' skills, habits, and mindsets:

- **Structures that integrate cognitive, social, and emotional development into learning include:**
  - curricula and dedicated time that enable students to explicitly learn and practice valued skills, habits, and mindsets (e.g., social and emotional learning or conflict resolution curricula);
  - opportunities and routines that reinforce skills, habits, and mindsets during everyday instruction and school activities;
  - scaffolds that support executive functions like planning, organizing, implementing, and reflecting on tasks; and
  - collaboration protocols and rubrics that support interpersonal skill development in the context of subject matter classes.
- **Practices that make learning and skill development visible and supported include:**
  - strategies that reinforce skill, habit, and mindset development; affirm students' abilities and assets; and provide appropriate scaffolds (e.g., using growth-oriented language and practices);
  - strategies that help students describe their thinking and feelings; build self-awareness; and develop strategies for calming, self-management, and problem-solving; and
  - practices such as educator modeling, think-alouds, and metacognitive activities that make the development of cognitive, social, and emotional skills visible while conveying what is possible.

While we know that learning environments with these features help young people thrive in their learning and development, there are structures and policies in our current system that often inhibit the implementation of such features. These obstacles have stemmed from the failure of systems to recognize the connections among cognitive, social, emotional, and academic learning. For example, accountability structures in U.S. public education focused for many years exclusively on test scores in reading and mathematics, coupled with a "no excuses" philosophy that minimized the importance of social and emotional supports in schools. As a result, schools have often pared down the development of skills to attend to tested subjects and their related content.

This has exacerbated the perception that academic learning is distinct from the development of habits and mindsets, when in fact the research indicates that academic success is enhanced when they are developed together with academic content. As a consequence, many preparation programs for educators and administrators have not helped practitioners understand the interconnectedness of these skills, habits, and mindsets and, consequently, underprepared them to support students in building them.

Recent critiques have also pointed to the implementation of these skills in culturally insensitive ways that can exacerbate psychological harm against marginalized groups when ideas like self-regulation begin to serve as another form of policing in schools, discouraging students from displaying emotion and requiring forms of communication that align with the culture and norms of privileged groups. The weaponization of these practices against youth of color and other marginalized groups can fundamentally constrict the development and expression of their full selves, paradoxically undermining the purpose of SEL itself. In seeking to ensure that students are able to develop their full selves, it is imperative that the development of skills, habits, and mindsets is culturally responsive and anti-racist in vision and implementation.

While these challenges remain present, there are many ways that leaders and educators can build schools that intentionally develop valued skills, habits, and mindsets. (See Table 5.1.) Schools can support learners in developing their cognitive, social, and emotional capabilities by providing opportunities for their development throughout the day. Structured SEL programs are a good starting point but should be complemented with additional opportunities for these skills to be taught and integrated alongside traditional academic development. There is no single way to achieve these goals, but district and school leaders can consider a variety of structures and practices. (See "Where to Go for More Resources" at the end of this section.)

Table 5.1
Transforming Learning Settings for the Development of Skills, Habits, and Mindsets

Transforming from a learning setting in which ...	Toward a learning setting in which ...
the focus is on academic learning only	cognitive, social, and emotional skills and habits that are essential to academic and life success are included
an isolated program is used to teach SEL skills	skill, habit, and mindset development are integrated throughout the curriculum and all school policies and practices
schools use punitive approaches to challenging behaviors that lower students' grades, deny privileges, or exclude them from activities	schools explicitly teach desired behaviors with many opportunities to recognize and practice those behaviors
culturally dominant approaches assume only one mode of interaction or expression and sanction other ways of communicating	sensitive and affirming ways of developing skills, habits, and mindsets build on, rather than undermine, students' cultural contexts and modes of expression
skills, habits, and mindsets are addressed only in school	families are enabled to understand the ways in which they can reinforce the development of skills, habits, and mindsets

Integrating Social, Emotional, and Cognitive Development Into Learning

In order to ensure that these abilities are developed and reinforced in coherent ways schoolwide, it is useful for schools to start by identifying the skills, habits, and mindsets they value as a community and then work to create an agreed-upon set of goals and norms for staff and student learning and behavior. These may be called "habits of mind," norms and values, or graduate competencies that pervade all aspects of the school's operations. For example, East Palo Alto Academy—the school in this section's opening vignette—identified "Five Community Habits" that came to inform the school's collective work in support of youth learning and development. Batelle for Kids illustrates how to develop graduate competencies that can guide the skills and habits that focus teaching and learning in a school. Identifying a set of valued skills and mindsets is an important starting point that can inform the adoption and implementation of curricula, pedagogy, and routines to track student mastery toward those goals.

Curriculum and instruction for skill, habit, and mindset development

Academic learning should be accompanied by curriculum and instruction that explicitly engage students in developing social, emotional, and cognitive skills, habits, and mindsets.

Many formal programs and curricula for social, emotional, and cognitive learning have shown considerable success. Studies show that students who engage in programs show improvements in their social and emotional skills; attitudes about themselves, others, and school; social and classroom behavior; and outcome measures like test scores and school grades. A meta-analysis of over 200 studies found that students in SEL programs experienced reductions in misbehavior, aggression, stress, and depression and significant increases in achievement. A second meta-analysis found that these benefits were sustained in the long term, showing how learned attitudes, skills, and behavior can endure and serve as a protective factor over time. (See "Developing Social, Emotional, and Cognitive Skills at Lamar Elementary" for a look at explicit instruction on skill development in action.)

Developing Social, Emotional, and Cognitive Skills at Lamar Elementary

It is afternoon on a rainy day in San Antonio, and the racially and ethnically diverse 1st-grade class of 17 students is settling in for today's lesson on five "constellations" of a growth mindset: empathy, persistence, resilience, optimism, and flexibility. Their teacher, Cassandra, is using everyday scenarios from students' lives to help them learn the concept of a growth mindset. Students are working in small teams to create a skit related to their assigned growth mindset constellation, which they will act out for their peers, who then determine which constellation is being presented. The activity is itself a means to develop social and emotional skills, as students must collaborate and learn to observe closely the emotions others are communicating.

Cassandra is sitting in a chair, with students sitting on the floor in front of her. Students are divided into groups of three or four. She hands out paper strips to groups of students. Each piece of paper has a scenario that aligns with one of the five aspects of a growth mindset. After students gather in their groups, Cassandra walks around helping different groups to read the scenario they have been given and develop a skit.

After about 10 minutes, Cassandra gives students a 1-minute notice to wrap up. When everyone is settled and has their materials for the next part of the lesson, she says, "Let's see which group wants to go first." As students eagerly raise their hands, Cassandra picks a group and provides instructions: "If you're acting it out, you may go to front of the room. After they read their story and act it out, you're going to write down which of these [constellations] their story represents, based on what they say they should and should not do."

The first group of students reads their story out loud. It is a story about not being good at playing soccer during recess. The three students act out the story. Cassandra then asks the students, "What should you not do?" A student says: "Give up!" "What should you do?" Cassandra asks. "Write it down on your board." Students write and then Cassandra adds, "You're going to flash [your board] to the group." The students hold up their papers.

Cassandra reads the papers that students are holding up and says, "I see persistence. Did you all get persistence? Was that right?" The group of students nod yes and sit down. The students use their napkins to erase their plastic protectors.

The next group of students reads their story. Cassandra summarizes, "They want to play basketball but there is no basketball, but there are jump ropes. What should you not do?" A student says, "Don't grab the ball." Cassandra then asks, "What should you do?" Another student responds, "You should play jump rope. Since there are so many jump ropes, it's fine." Cassandra then asks, "Which of these is their story?" Some students hold up flexibility, and others hold up resilience. Cassandra asks a student why she selected resilience. The student responds, but too quietly to hear. Cassandra says, "I could see how it could be resilience," and adds, "The thing they wanted to do, they couldn't, so they were flexible … but sometimes more than one word fits." The class repeats the process with the rest of the groups, as Cassandra engages students in exploring what constellations of a growth mindset—empathy, persistence, flexibility, resilience, and optimism—are reflected in each scenario.

Source: Adapted from Darling-Hammond, L., Oakes, J., Wojcikiewicz, S., Hyler, M. E., Guha, R., Podolsky, A., Kini, T., Cook-Harvey, C., Mercer, C., & Harrell A. (2019). *Preparing Teachers for Deeper Learning*. Harvard Education Press.

If schools choose to adopt an evidence-based program, there are particular features to consider. Research suggests that the most effective SEL programs are those that:

- are well-sequenced;
- engage students in active learning;
- focus on teaching and reinforcing specific skills; and
- are explicit about the skills they are teaching so that youth recognize what they are learning and how to use the skills.

However, adopting a program is not enough to ensure positive outcomes. To be successful, educators need ongoing coaching and follow-up support beyond an initial training. It is important that school leaders support the effective implementation of programs by setting high expectations and allocating resources for programming.

It is also important that educators prevent equity pitfalls in implementing curricula. Practitioners must emphasize student agency and the assets they possess and can develop, rather than assuming that the purpose of cognitive, social, and emotional development is to identify students' deficits and instill skills some do not possess, meanwhile pointing out or punishing shortcomings. In addition, it is important that leaders and educators understand and appreciate the similarities and differences in cultural expressions of cognitive, social, and emotional competencies. Without this, practitioners may assume some students do not display or embrace skills, habits, or mindsets that conform to a mythical norm. The National Equity Project has developed guidance to prevent such pitfalls, as has CASEL, which offers a five-part webinar series to help practitioners and decision makers develop and implement SEL in ways that support and advance equity, social justice, and anti-racist practices.

Practitioners must emphasize student agency and the assets they possess and can develop, rather than assuming that the purpose of cognitive, social, and emotional development is to identify students' deficits and instill skills some do not possess, meanwhile pointing out or punishing shortcomings.

Dedicated time for skill, habit, and mindset development

Dedicated and consistent time for social, emotional, and cognitive learning—in classroom meetings, advisories, and other settings—is needed to help students develop self-awareness along with valued skills and competencies.

To ensure students have the opportunity to learn and practice valued cognitive, social, and emotional skills, schools need to dedicate consistent time—either within a given curriculum or in the school day—to their development. In elementary classrooms, this might take place in morning meetings or another dedicated block in the day. In middle and high schools, this can take place in advisories or other regular meeting times with a small, stable group of students and adults. In all schools, it is important that teachers receive training and ongoing support to facilitate those meetings effectively. Because these meetings may involve discussions of difficult topics (e.g., racism, sexism, stereotyping, bullying, poverty, emotional and mental health, body image), teachers need to be equipped to manage those conversations carefully and productively. (See "Morning Meetings as Part of the Comer School Development Program" for a closer look into the impact of routines that provide dedicated time for social, emotional, and cognitive development.)

Morning Meetings as Part of the Comer School Development Program

At the Davis Street Magnet School in New Haven, CT, which serves students in grades k–8, students participate in morning meetings that are foundational to the Comer School Development Program process. This daily school structure is a routine that brings consistency while offering opportunities for relationship and skill building that further build the school community and culture.

Several 4th- and 5th-grade students describe the impact of the morning meetings in their own words:

> You get to interact with other people and tell them what you feel instead of bubbling up and keeping it inside and then it hurts. But you get to let it out and nobody blames you or says "no I didn't" or stuff like that. Instead, you get to tell them what's wrong, and you get to work it out. —Brianna

> I think morning meeting is good because it helps kids with their problems. Like for me, it helped me a lot this year. I used to be getting into a lot of trouble. But then when I learned the Comer pathways, I kind of changed a little. Last year I was getting into trouble and stuff, so now I don't.... [The pathways that have helped me] are the cognitive, the language, and the social. I learned how to think before I act. —Shemar

> Morning meeting means a lot to me because it helps me with my day. If I had a problem, like yesterday afternoon, I can bring it up to the class and I can go face-to-face with the person to tell them how I felt about the problem that we had. And it means a lot because it's taught me the ethical pathway, how to talk to people so you don't hurt their feelings when you're asking them to do something or to give them anything. —Rachel

Through their words, these students explain that morning meetings have taught them how to articulate the stresses that preoccupy them and have the potential to undermine their learning and good behavior. In addition, the meetings have provided them with the time, space, and opportunity to express themselves publicly in a safe and collaborative environment—environments that recognize and value them as individuals who are worthy of having voice.

Source: Adapted from Comer, J. P., & Savo, C. (2009). *Focused on development: The Davis Street Interdistrict Magnet School in New Haven, Connecticut* [Video recording]. Comer School Development Program, Yale Child Study Center.

Creating habits by integrating skills throughout all the work of the school

Integrating SEL in all classes and settings throughout the school day enhances the development of valued skills, habits, and mindsets.

It is important to recognize that stand-alone SEL curricula, while useful, are insufficient to inculcate the needed skills, habits, and mindsets when such practices are not actively modeled by adults, incorporated throughout the school day—during classes, lunchtime, recess, and extracurriculars, as well as in disciplinary policies and practices—and integrated into these routines in ways that are culturally affirming and relevant. As we describe in "Integrated Support Systems," all the members of a school community need to develop a shared understanding of child and adolescent development so that students experience a coherent, supportive, mutually reinforcing set of practices that can help skills and mindsets take root. Integration of these skills in ways that develop long-term habits can help eliminate the view that some students need to be "repaired" and ensure that an experience of equity is at the center of these practices.

In studies of urban high schools integrating SEL into all aspects of the schools and coupling this learning with social justice goals, researchers found that many examples of valued skills and mindsets could be taught as part of disciplinary courses. In these schools, educators incorporated classroom activities focused on perspective-taking and developed empathy through curricular projects that asked young people to understand real-world challenges. Students learned interpersonal skills and developed executive functioning as they employed specific strategies for collaborating on projects and developed a growth mindset while revising their work in response to feedback. Community service helped them develop a social awareness and a sense of purpose and agency. A schoolwide emphasis on social justice, which highlights ideas of social engagement and interdependence and incorporates them into daily practice, helped to enhance students' motivation and sense of agency, increase their achievement and attainment, and reduce educational inequality. In these schools, researchers found greater student engagement, achievement, and positive behavior (i.e., being collaborative and supportive of their peers, resilient, and employing a growth mindset) than in comparison schools.

Integrating social and emotional learning can be done organically and intentionally. School leaders and educators can model the use of SEL language and practices throughout the day, which creates a schoolwide climate for SEL. Educators can capitalize on teachable moments as they emerge to reinforce, model, and practice valued social and emotional skills. Educators can also create opportunities for reflection to foster self-awareness, self-directed learning to emphasize self-management, and collaboration to nurture learners' interpersonal skills in teaching different content areas.

Integrating social and emotional learning can be done organically and intentionally.

Practitioners can also integrate opportunities for social and emotional development into their school and classroom routines. Figure 5.4 provides a visual illustration of how to integrate SEL throughout the school day.

Educators can also create units of study or thematic units. Helpful resources are readily available: Facing History and Ourselves, EL Education, and Transforming Education have tools and curricula that include embedded SEL components. Resources based on the science of learning and development are available from the National Commission on Social, Emotional, and Academic Development, CASEL, Greater Good Science Center, and Turnaround for Children. (See "Integrating Academic Learning and Skill Development Through Community-Based Learning" for a deeper look at how one school integrates academic, cognitive, social, and emotional learning.)

Figure 5.4
Ways That Social and Emotional Learning Can Be Integrated Throughout the School Day

Source: Melnick, H., & Martinez, L. (2019). *Preparing teachers to support social and emotional learning: A case study of San Jose State University and Lakewood Elementary School*. Learning Policy Institute.

Building Skills and Knowledge Through Community-Based Learning

Polaris Charter Academy is a highly successful public school in Chicago that serves k–8 students in a primarily Black community. It serves a large percentage of students from low-income backgrounds and has supported them in achieving strong academic results.

Polaris integrates character development and academic learning and has created learning opportunities that allow students to develop these skills simultaneously. Students engage in "learning expeditions" that promote character and academic growth through collaborative projects that contribute to the community. For example, 7th-grade students took on the challenge of addressing gun violence in their community, a serious problem in a school where students were not allowed to use the outdoor playground or play outside after school, and in which 94% of students personally knew a victim. What could middle school students possibly do to make a difference? As one of those students, Ameerah Rollins, stated, "More than you might think."

Students interviewed local "Peacekeepers" (e.g., community organizers, volunteers, counselors, clergy, and police) and created a book to describe and honor their work, which was professionally published and distributed nationally. They created public service announcements about gun violence that were aired on public television throughout the city. In addition, they organized a citywide Day of Peace—a ceasefire of gun violence—and led a day of neighborhood "Sweep and Greets": cleanup parties with music and food. While they did not manage to stop all gun violence in Chicago that day, for the first time in history, there was no recorded violence in their area, which covered almost a third of the city. Their project can be seen here.

Taken collectively, these learning activities provide ample opportunities for students to build a sense of belonging; strengthen their interpersonal skills; learn to plan, manage, and synthesize their ideas; and articulate their learning in ways that emphasize the importance of community and peace. These activities integrate skills like self-regulation and executive function, and positive mindsets like belonging and growth mindset, through activities driven by student agency and character.

Source: Adapted from a vignette provided by Ron Berger, Senior Advisor on Teaching and Learning at EL Education.

Developing Productive Habits and Mindsets

Students' beliefs and attitudes have a powerful effect on their learning and well-being. If students hold negative perceptions of their ability to learn and thrive, this view can quell motivation and cause them to disengage. Conversely, productive dispositions can support youth in persevering through academic and personal challenges and put them on the road to academic success.

Work at the University of Chicago has identified four key mindsets as conducive to perseverance and academic success for students:

1. Belief that one belongs at school
2. Belief in the value of the work
3. Belief that effort will lead to increased competence
4. Sense of self-efficacy and the ability to succeed[2]

Effective programs that promote stronger learning for youth involve creating climates in which they feel respected and affirmed and giving them challenging work they are encouraged to improve upon.

Helping students build productive habits and mindsets can set into motion a cascade of effects that accumulate over time to result in more positive school outcomes, such as an increasing sense of connection to school and self-concept. These, in turn, result in higher levels of academic engagement that become self-reinforcing. Thus, teaching should seek to develop:

- productive mindsets that enable perseverance and resilience, especially a growth mindset;
- executive functioning that supports planning, organizing, problem-solving, and self-management;
- interpersonal and communication skills that support collaboration and enable students to describe their academic work and learning and their growth in character;
- reflective mindsets and skills that enable students to evaluate personal strengths, challenges, and progress toward goals; and
- compassionate and civic mindsets that encourage students to treat others with kindness, celebrate different identities, and contribute positively to their communities.

Strategies for nurturing growth mindsets

Students' growth mindsets can be cultivated by carefully scaffolding learning and offering opportunities for feedback and revision that lead to greater competence.

Connecting skills development and academic endeavors to personal values can be really important to students because it can help students see the purpose of a skill as something that matters to them. One example of this is students holding a growth mindset about their intelligence and abilities. Young people who develop a growth mindset—the belief that they can improve through effort, trying new strategies, and seeking help—are less likely to become discouraged and more likely to try harder after encountering difficulties. They are more likely to tackle tasks at the edge of their capabilities than students who believe their skills are fixed. Students with confidence in their abilities to succeed on a task work harder, persist longer, and perform better than their less efficacious peers. This translates into stronger performance in school, greater achievement gains, and a willingness to try new things, and will often be transferred to other activities in life as well.

The core principle that skills can always be developed is consistent with what we know from neuroscience: that the brain is constantly growing and changing in response to experience. Learning this fact alone has been found to help change students' perspectives on their learning and improve their perseverance. Providing feedback focused on effort and work process encourages students to adopt a growth mindset, whereas feedback that focuses on traits (e.g., whether someone is "smart") has been found to depress student motivation and achievement.[3]

Providing students with meaningful learning challenges, supports, and a clear sense of progress leading to mastery helps students develop a growth mindset. For example, educators can construct learning experiences that make challenging tasks motivating and enhance students' expectancies of success by actively structuring information, guiding and scaffolding students' efforts, and providing

multiple opportunities for students to grapple with information and represent understanding in a variety of ways with ongoing feedback.

Educators can also support students in developing a growth mindset by making a regular practice of providing opportunities for revision in response to feedback. The power of constructive critique and revisions are on full display in the practices implemented by an expert educator as he guides students at Presumpscot Elementary School in Portland, ME, in reviewing and providing feedback on written drafts. Instructional tools can support this practice, including the use of rubrics and self- and peer assessments. When followed by opportunities for revision, these tools can reinforce a growth mindset, as students consider specific feedback to guide the improvement of their work and build their belief in their ability to grow and succeed.

Practices that build a growth mindset are of particular importance for students from marginalized groups, as they frequently face implicit messages about their worth and potential that affect their self-concept and confidence levels. To counteract the forces that nurture self-doubt, educators can use practices that reinforce a growth mindset along with language and actions that show students that they are believed in and valued. For example, researchers have found that achievement is improved when students receive affirmations from teachers that they expect students to be able to meet a high standard when they revise their work, along with support to do so.[4] (See "'Revision and Redemption' at East Palo Alto Academy" for a closer look at how a standard grading practice was turned on its head into a new policy that modeled a growth mindset.)

Practices that build a growth mindset are of particular importance for students from marginalized groups, as they frequently face implicit messages about their worth and potential that affect their self-concept and confidence levels.

"Revision and Redemption" at East Palo Alto Academy

To develop a growth mindset and to enable students to develop a strong academic identity, East Palo Alto Academy (EPAA) developed a pervasive policy of "revision and redemption." Teachers believed that students should have the opportunity to receive feedback and reflect on their own learning and performance and have multiple opportunities to use that knowledge to revise their work and demonstrate their competence. One teacher noted, "In traditional high schools, time is the constant and quality is the variable; but at EPAA, quality is the constant and time is the variable."

These practices were made possible by the fact that student work was recognized as the centerpiece of the school and was supported, exhibited, and discussed. Throughout the year, students did work that they exhibited publicly. As in many schools, they exhibited artwork (and created large murals to cover school walls), they wrote poetry and performed poetry slams, they undertook mock court trials and debates, they created their own Museum of Tolerance exhibits, they wrote and produced products that were on display in classrooms, and they designed brochures on health topics like diabetes and distributed them in the community.

These were part of the ongoing activities that teachers organized within the curriculum. They were designed to represent what Harvard Graduate School of Education's David Perkins calls "performances of understanding."[5] When students are called upon to produce meaningful work and share it with an audience beyond the teacher, motivation and pride increase, as does students' drive to work toward a standard of excellence. This meant that instead of moving on before students had demonstrated mastery of a skill, students would take the necessary time to revise their work until it met the standard of quality. Sometimes revision was planned into the curriculum for major assessments, especially papers and products for which several drafts were anticipated. Other times students worked on revisions of their work after a unit had been concluded, or even in the summer. Students were expected to revise if they failed a major assessment, and they were encouraged to revise at other times as well in order to improve their work, their understanding, and their grades.

Although students often were initially mystified by the expectation that they would do something more than once, and they needed to learn how to accept and use feedback, virtually all spoke highly of this practice once they had come to understand it. An often-heard comment from students was one like this: "What I like most about EPAA is the chance that students [have] to revise their work and improve their abilities."

Source: Adapted from Darling-Hammond, L., Altamirano, R., Ramos-Beban, N., & Hyler, M. (2016). *Be the Change: Reinventing School for Student Success*. Teachers College Press.

Strategies for developing executive functioning

Well-designed projects and exhibitions of learning help learners develop executive functions, including their ability to plan, organize their efforts, problem-solve, and self-manage.

Among the key habits that are important for academic success and development are those related to executive function, which help learners attend to tasks, plan their work, problem-solve in the face of emerging challenges, and manage themselves in the learning process.

Approaches and supports that can help strengthen executive function are strategies that support self-directed learning and work management—two habits associated with executive function that can be explicitly taught. Students can also be explicitly taught to develop organizational structures, plan and track their actions, and decide what behaviors they will pursue, which also help to strengthen executive function. Educators at the UCLA Community School in Los Angeles, CA, offer one rich example of this. At this school, students in grades 2–12 develop these habits and skills through the use of community-based self-assessment routines that promote executive function along with their bilingual reader identity. Early findings on the use of these tools indicate that students found these routines helpful and that their reflection and management skills deepened over time. These findings align with the broader research that shows that students who receive instruction in learning strategies, such as managing study time, goal setting, and self-evaluation, perform better academically.

The instructional practice of having youth publicly share their work in written, verbal, and media formats is another way executive function can be nurtured in classrooms. Making learning public builds student ownership of the work and cultivates executive function skills, particularly when these presentations incorporate opportunities for learners to share their strengths, challenges, and goals. Structures that support students to present their thinking, understanding, learning, achievements, and organizational skills include:

Making learning public builds student ownership of the work and cultivates executive function skills, particularly when these presentations incorporate opportunities for learners to share their strengths, challenges, and goals.

- sharing their thinking and understanding with small groups or the whole class as part of the learning process;
- regularly engaging in organization, reflection, self-assessment, and collection of evidence of their work;
- developing and planning presentations for various audiences in formal and informal settings; and
- giving attention to feedback provided that can inform and improve their work and skills moving forward.

Each of the above practices supports the development of executive function and does so in ways that empower and engage learners. Schools affiliated with EL Education, Envision Learning, and High Tech High provide rich illustrations of how these structures and practices can be implemented in classrooms to support the students in making learning public while building valued habits and mindsets.

At Summit Learning, students refine and improve a set of defined cognitive skills—including those associated with executive functioning—through project-based learning. Summit educators developed a cognitive skills rubric that operates in every subject and grade level. The faculty have built out, field-tested, and refined a library of projects in grades 6–12. Students work on projects in which they apply the content they have learned to real-world situations to develop these essential and transferable lifelong skills. Multiple cognitive skills are embedded in each project. Most projects culminate in a performance-based assessment such as an essay, lab report, or presentation.

Maintaining a well-scaffolded environment with strong organizational routines can work in conjunction with explicit learning opportunities to promote the habits and skills associated with executive function. For example, organizational routines in classrooms can help youth practice approaches to tasks that can become part of their own organizational structures and self-management later. These reliable approaches to tasks—ranging from organizing one's notebook to planning a well-scaffolded project to engaging in well-organized collaborative tasks—can help students tackle challenging tasks and promote learning. These approaches simultaneously promote habits and strategies that can become part of their repertoires, especially if teachers are explicit about their reasons for different structures and if they gradually reduce scaffolding over time.

Strategies for developing interpersonal skills

Students can learn to collaborate and build their interpersonal skills through well-structured approaches to group work that are regularly used.

Students' interpersonal skills, including their ability to interact positively with peers and adults, to resolve conflicts, and to work in teams, all contribute to effective learning and lifelong behaviors. Specifically, developing students' interpersonal skills helps promote learning and well-being by providing opportunities to:

- learn skills for communication and problem-solving;
- learn how to connect with others and intentionally seek out others for support; and
- develop empathy and an awareness of one's own and others' feelings.

A rich learning setting provides structures and practices that enable peers to collaborate in ways that support the development of mindsets, habits, and social skills. **Well-managed group work** is one such structure that has been proven to benefit interpersonal development. Substantial research identifies benefits of social learning in well-managed groups,[6] and the capacity to work well in groups is an increasingly valued outcome of schooling. Collaborative learning can be used to provide students with learning assistance from peers, opportunities to articulate their ideas, and opportunities to develop metacognitive skills like self-regulation and executive function as they learn to manage themselves to interact productively with others and seek out help from teachers and peers.

Well-managed group work is one structure that has been proven to benefit interpersonal development. Substantial research identifies benefits of social learning in well-managed groups, and the capacity to work well in groups is an increasingly valued outcome of schooling.

Cooperative small group learning is one of the most studied approaches in education—with hundreds of studies finding significant achievement benefits for students when they work together on learning activities, as well as gains in student self-concept, social interaction, and time on task. Researchers have identified a number of social processes that help to explain why small group work supports individual learning. These include opportunities to share original insights, resolve differing perspectives through argument, explain one's thinking about a phenomenon, provide critique, observe the strategies of others, and listen to explanations.

While well-managed group work can enhance student learning, it requires group-worthy tasks in which all must engage for the work to be successfully accomplished, support for students to learn to work together, and sophisticated questioning and scaffolding skills on the part of teachers. For example, in complex instruction classrooms—a much-researched approach that uses cooperative learning to teach at a high academic level using carefully constructed, interdependent group tasks—students are taught to undertake different roles (e.g., materials manager, timekeeper, task minder, and others).

To support productive collaboration, the teacher orchestrates tasks, relationships, and supports, and disrupts status hierarchies that can develop among students based on dis/abilities, language background, or other characteristics. To do this, teachers structure tasks to ensure that students can use their different competencies to accomplish a group task. Teachers can also "assign competence" to a student by recognizing the student's contributions to the task by publicly noting his or her contribution or expertise, which boosts the student's participation and standing in the group. These moves produce strong learning gains and reduce achievement gaps among student groups. (See "Structured Peer Collaboration at Impact Academy of Arts and Technology" for an example of well-managed group work.)

Structured Peer Collaboration at Impact Academy of Arts and Technology

In a freshman math class at Impact Academy of Arts and Technology in Hayward, CA, students do a jigsaw activity in which they start in pairs on one problem and then join a group of four to teach their new group members how to do the problem. The students work together at a very high level, well above what might be expected for 9th-graders. Students who are "learners" during the jigsaw are expected to take notes and ask clarifying questions, while the student who is "teaching" is expected to make sure that everyone in the group knows how to do the problem—they are responsible for each other's learning. While the room fills with chatter and the sound of pencils on paper, the teacher moves around the room to ensure that students are in fact on task and on track. At one group, the teacher stops and asks them to pause and look closely at whether their final answer can be simplified one more time. The group of four looks intently at the solution and together they realize their error—all four students erase their work to get the right answer.

At the end of the short jigsaw, the teacher takes a moment to clarify for the whole class. She says:

> I want to point out something from one group. If you write $x+1\sqrt{3}$, it looks like you're only multiplying this radical by 1, but you are actually multiplying by $x+1$, which is why parentheses are so important. Everyone make sure you have that distinction in your notes.

This point of clarification may not have become apparent if students were working alone or if the teacher did not also have a way in which to check for understanding along the way.

Using a group task like the jigsaw, in which students must become teachers of their peers, the information becomes immediately more useful than if they were only receptors of information and passively taking notes. This example of an instructional segment is the norm at Impact Academy; students regularly engage in collaborative problem-solving as a means of learning.

Source: Adapted from Cook-Harvey, C. M. (2014). *Student-centered learning: Impact Academy of Arts and Technology*. Stanford Center for Opportunity Policy in Education.

As structured collaboration enhances learning, it also provides opportunities for students to build connections with their peers, which can foster empathy, cross-cultural dialogue, and a sense of collective responsibility and community. (See "Positive Developmental Relationships" for a fuller discussion of community-building practices.)

Practices that promote metacognitive skills

Self-awareness and metacognitive skills can be supported through opportunities for self-reflection and self-assessment using reflection protocols, rubrics, and other tools.

All educators can play an active role in supporting students with a repertoire of words and strategies that help them build self-awareness—another important habit that can support learning and well-being. In many cases, the structures and practices that support collaboration, executive function, and growth mindsets also nurture a sense of self-awareness among learners. For instance, as they assess and manage their progress and learn to share space and time with their peers, students build their capacity to be reflective and take stock of their actions and emotional states.

In addition, educators can help nurture self-awareness by using tools or approaches that guide students through a process that helps them identify their thinking or emotions and articulate them in productive ways. For example, teachers might guide students through conflict resolution by walking students through a structured, stepwise process that involves calming techniques, turn-taking (in which each student acknowledges the other's perspectives and emotions), reflection on what happened and how it affected various individuals, and collaborative solution development.

In addition, educators can help nurture self-awareness by using tools or approaches that guide students through a process that helps them identify their thinking or emotions and articulate them in productive ways.

Collaborative learning structures can also provide occasions for the development of self-awareness and metacognition, as this vignette from Lakewood Elementary School illustrates. Groups conducted a collective analysis, developed a consensus on central ideas, and worked together to present these ideas publicly to the class; then they reflected on their work and presentation to figure out how to improve in the future. This collaborative work not only allowed learners to practice their interpersonal skills, but also reinforced important habits and mindsets related to self-awareness, a growth mindset, and executive function.

Fostering Metacognitive Skills at Lakewood Elementary School

Located in the Sunnyvale School District in the heart of Silicon Valley in Northern California, Lakewood Elementary serves a diverse student population: 61% are socioeconomically disadvantaged, and 45% are English learners. With the school motto—"technology and social smarts for the 21st century"—and the school's emphasis on SEL, Lakewood educators create rich opportunities for learners to develop their interpersonal skills while nurturing other valued skills, habits, and mindsets.

In Allyson Guida's 5th-grade classroom, 24 students are concluding a class project on different world regions. Students were divided into teams, and each team was assigned an article to read. The team members worked together to decide the main idea of the article and the most important

details, which they later presented to the class. These presentations were recorded, and students watched themselves on video to assess their individual presentations. In today's class, Guida explains, they will assess their whole group's work:

> Your job today is to make sure you finish self-assessing as a group. Remember we talked a lot about how we watched the video the first couple of times to just look at ourselves, right? And we watched ourselves present to think about what we can do better? [Today] when you're using the rubric, you want to be thinking of the whole group. Think of yourselves as a unit. Just because one person moved and had gestures doesn't mean your group gets a 5 [out of 5], right? … Then you're going to have 5 minutes to write a promise or a commitment to yourself for what your group is going to do next time when we present.

One student asks if it would be OK to continue to revise the group's PowerPoint slides. "Yes, absolutely," Guida responds. "That's definitely a conversation I want you to have in your group." Opportunities to revise work are common in Guida's class.

After receiving a hand signal from their teacher, students quickly pick up their laptops and rubrics, find their groups of three, and settle into different corners of the room: some at desks, others huddled together on the carpet. For this particular activity, the groups were formed based on student choice and student ability; students chose the geographic region in which they were most interested, and from there Guida matched them based on reading ability and what she calls "time on task."

The room is soon abuzz with activity, while some groups listen quietly to videos of their presentations on their laptops using earphones. Guida walks through the classroom initially, making sure each of the students has his or her rubric and helping direct a student who was absent the previous day.

Three boys bow their heads over laptops at a cluster of desks. "I probably got like a 3," one student tells his partner. "No, I think a 4," says another. "We demonstrated some knowledge, but we didn't demonstrate like, a lot of knowledge. I think it was in the middle." His partners agree. But, he adds, "We got a 4 on speaking and making eye contact with the audience."

When asked what happens if they do not get a good grade on their presentation, one student responds, "It's just for practice." Her partner adds, "We write it on a Post-it: We have to put what we should do next, and that will help us for the rest of the year … as long as we learn from it."

In Guida's classroom, students have collaborative projects that culminate with whole-class presentations once a trimester. In order to teach students the skills they need to work in teams, Guida introduces specific lessons to help students develop their social interaction, relationship, and planning skills, and then reinforces what they learned by offering opportunities, such as these collaborative projects, for students to apply them in the classroom, getting regular practice and feedback as well as opportunities for reflection and growth.

Source: Adapted from Melnick, H., & Martinez, L. (2019). *Preparing teachers to support social and emotional learning: A case study of San Jose State University and Lakewood Elementary School*. Learning Policy Institute.

To help students learn how to reflect on what they have done and learned, educators can also use think-alouds and other modeling practices to describe their own thinking and processing. The use of metacognitive language and modeling can help make learning and skill development visible while showing learners how one can pose internal questions or pause to reflect in ways that grow self-awareness and productive paths forward. As educators support students in becoming more self-aware, they can couple this practice with attention to strategies for calming and self-management. Personal and academic challenges will inevitably emerge in students' developmental journeys that will affect their well-being and engagement in learning tasks. With this, practitioners can provide structured time and opportunities to help young people recognize their emotional states and identify strategies they can use to cope.

Summary

Schools and classrooms that simultaneously emphasize academic growth and the development of the valued skills, habits, and mindsets that propel it are necessary for student learning and well-being and for educational equity. This section has illustrated how certain key structures and approaches can support the integrated and progressive nature of skill development and how they can be incorporated into the daily experience and work of school. Examples include dedicated time and curricula for social, emotional, and cognitive development; consistent routines and opportunities; projects that create opportunities for youth to build their skills along with disciplinary knowledge; and the practices that make their development visible and scaffolded.

Where to Go for More Resources

Integrating social, emotional, and cognitive development into learning

- *Reunite, Renew, and Thrive: Social and Emotional Learning (SEL) Roadmap for Returning to School* (Collaborative for Academic, Social, and Emotional Learning): This guide provides school leaders with whole-school, anti-racist SEL strategies centered on relationships and built on the existing strengths of a school community. Specifically, the guide provides critical SEL practices that promote healing and equity; points to actions that schools can take to prepare, implement, and sustain their integrative SEL work; and provides tools to help them along the way.
- Guide to Schoolwide SEL (Collaborative for Academic, Social, and Emotional Learning): This guide provides information for schools to coordinate and build upon SEL practices and programs to systematically integrate them into all educational experiences and promote equitable outcomes for all students.
- SEL Implementation Tools and Resources (Collaborative for Academic, Social, and Emotional Learning): This webpage provides several resources for schools and districts to implement SEL in their communities, such as program guides, an SEL assessment guide, a video called *SEL 101* for parents, and a district resource center that offers additional tools and resources to support high-quality implementation.
- Guidance on Culturally Responsive-Sustaining School Reopenings: Centering Equity to Humanize the Process of Coming Back Together (Metropolitan Center for Research on Equity and the Transformation of Schools): This guide poses questions and practices for

policymakers, district and school leaders, and school personnel to consider for engaging in culturally responsive, equitable, and sustainable school reinventions.

- Social Emotional Learning and Equity: Pitfalls and Recommendations (National Equity Project): This chart highlights potential pitfalls and provides guidance on how to avoid them as schools advance equity and inclusion in the implementation of SEL.
- *Social and Emotional Development Matters: Taking Action Now for Future Generations* (Pennsylvania State University): This broad policy brief indicates a number of steps with actions to take at every level (federal, state, district, school, classroom, and home) to integrate SEL into a whole child approach.
- *We Are Crew: A Teamwork Approach to School Culture* (EL Education): This book serves as a guide for improving school culture, morning meetings, and advisories. It is also accompanied by free online resources—a toolkit with examples and models, professional development resources, and more than 40 videos.

Developing productive habits and mindsets

- PERTS (Project for Education Research That Scales): This website connects educators with an array of resources that can help them apply evidence-based strategies to advance student success, including those that support the development of growth mindsets. Free resources like the Mindset Kit help practitioners learn about adaptive learning mindsets and the teaching and learning strategies that can enable it.
- How Learning Happens (Edutopia): This video series illustrates strategies that enact the science of learning and development in schools and other learning settings. It includes several video series on various topics, such as fostering positive relationships, cultivating a belonging mindset, developing foundational skills and academic confidence, establishing positive conditions for learning, and learning beyond the school day.
- Mindset Kit: Resources for Growing and Learning Mindsets (The Project for Education Research that Scales): The Mindset Kit is a free set of online lessons and practices designed to help you teach and foster adaptive beliefs about learning.
- *Teaching Adolescents to Become Learners: The Role of Noncognitive Factors in Shaping School Performance* (The University of Chicago Consortium on School Research): This report describes research on the five noncognitive factors related to academic performance, which include academic behaviors, academic perseverance, academic mindsets, learning strategies, and social skills.

- *Foundations for Young Adult Success: A Developmental Framework* (The University of Chicago Consortium on School Research): This report offers a comprehensive framework for youth development from early childhood to young adulthood, with an emphasis on the kinds of experiences and relationships that foster the development of factors that influence success.
- Models of Excellence (EL Education): This website provides a collection of high-quality pre-k–12 student work and resources, such as protocols, frameworks, and videos, on how to use student work with colleagues and in the classroom.

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For more information on the research supporting the science and pedagogical practices discussed in this section, please see these foundational articles and reports:

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Integrated Support Systems

How Integrated Support Systems Work at Social Justice Humanitas Academy

Social Justice Humanitas Academy is a highly successful community school serving a low-income community in Los Angeles County. There, the needs of the whole child are addressed by integrated support systems that begin with personalized approaches to teaching, advising, and counseling, augmented by a range of fully integrated services, community partnerships, and expanded and enriched learning opportunities. While 96% of the largely Latino/a student population comes from low-income families, 97% of students graduate in 4 years—well above the state and city averages—and 95% of them are prepared for college, having completed the A–G sequence required by California's public universities.

At this small school of just over 500 students, the centrality of relationships—made possible through **advisory classes** and **team-teaching** structures—is activated as the key strategy for identifying the need for academic and social and emotional supports. Educators implement **universal supports**, which include **routine, everyday practices** such as greeting students at the classroom door each period and spending passing periods in the hallways. Teachers, counselors, and other adults use information that is gathered through these practices, and they regularly come together to conduct data reviews to monitor students' well-being and determine if additional and/or more intensive interventions are required. All staff are involved and committed to this approach with students. As one student shared,

> It's not only the teachers. We also have people inside the office [who] help out, too. If they notice I'm struggling, they'll have a one-on-one talk outside. We have three counselors.... Let's say there's a kid crying outside their class. Nobody's just going to walk past them.... Somebody's going to go up to them and help resolve the situation and make it better.

Office hours through which each teacher provides after-school support are another routine support. At Social Justice Humanitas, **counselors** are present in numbers three times the average at other schools in Los Angeles Unified School District. They are assigned to specific students and maintain an open-door policy. Concerns that emerge are addressed at **Very Important Person** (**VIP**) meetings held regularly among staff, families, and students to identify additional supports when needed. These universal and integrated practices foster relationships, enable each student to feel known, and help staff to discover each student's unique strengths and needs. As one student noted: "The adults here, they care."

A range of **supplemental supports** is readily available. One key support is what the school calls an **adoption process**, by which students who need additional support spend consistent, sustained time with a teacher they know. Each teacher assumes a "caseload" of three to four students to provide them with continuous encouragement and to help students break down barriers that often prevent them from engaging fully at school. The teacher can also help the student access assistance from others who provide additional supports.

In addition to in-school practices, Social Justice Humanitas has partnered with community providers to expand options for students and families. For example, EduCare provides an **after-school space** for students where they can participate in a range of enrichment activities, including exercise

classes and tutoring, a wide range of student clubs, and an **ACE initiative** that is focused on the social and emotional needs of students and includes training for parents and educators as well. The ACE initiative operates through the summer and school year to nurture a sense of belonging, safety, and community. **University partnerships** with UCLA Center X and other local institutions support professional development for staff and school leadership as well as activities for students, ranging from field trips and internships to summer camps.

Students are also connected to a range of outside services, such as a mobile health clinic each week; mental health services, including crisis intervention and individual, group, and family therapy when needed; and connections to food services, housing supports, and clothing for families in need.

One student shared how integrated student supports have made a lifelong difference for him:

> I lived in really bad poverty and never saw myself even going to high school or college.... That wasn't in the plan for me. In orientation [at Social Justice Humanitas] it really got my attention, and it made me believe in myself. The teachers and mentors were working with me one-on-one. I became very good at reading, [got] high test scores, and began doing [well] in school, but they were not only focusing on my academics but what I was going through. I was going through very emotional hard stuff. The counselor[s] took their time talking to me and making sure I was OK.... It really stuck with me, knowing that I can seek out help and that I'm not going to be shamed.

For this student and others, the integration of academic, social, emotional, health, mental health, and family supports becomes a lifeline to success that is part of the school's coherent design for caring.

Source: Adapted from Saunders, M., Martínez, L., Flook, L., & Hernández, L. E. (2021). *Social Justice Humanitas Academy: A community school approach to whole child education*. Learning Policy Institute.

Overview of Integrated Support Systems

As school and community settings empower young people on their individual paths, integrated support systems, like those described at Social Justice Humanitas Academy, are essential to removing barriers to learning and development. Well-designed systems weave together school and community resources for physical and mental health, social services, and expanded learning time, integrating these practices into day-to-day schooling so that students' needs are readily identified and met holistically, without bureaucratic delays. They also ensure that practitioners have a shared developmental approach to thinking about students with an asset-based lens.

All children and youth have unique assets and interests to build upon in their learning journeys. All children also experience challenges that need to be addressed without stigma or shame to propel their development and well-being. These challenges can result from personal or family struggles or adverse childhood experiences, such as discrimination, food or housing insecurity, physical or mental illness, or other difficulties and inequities.

Research has documented that well-designed supports can enable resilience and success even for youth who have faced serious adversity and trauma. These supports include everyday practices that

communicate to students that they are respected, valued, and loved, as well as specific programs and services that prevent or buffer against the effects of excessive stress.

A comprehensive review of integrated student supports found that these approaches can support student achievement, and it highlighted community partnerships as a key lever for implementation.[1] Another research synthesis found significant positive effects of integrated support systems on student progress in school, attendance, mathematics and reading achievement, and grades. These studies also found measurable decreases in grade retention, dropout rates, and absenteeism.[2]

Orchestrating integrated supports that systematically assess students' comprehensive needs and strengths and coordinate resources in a unified and collaborative way is essential.

The situation facing young people, families, and educators today underscores the importance and urgency of this endeavor. The challenges of the COVID-19 pandemic, racial injustice, and economic uncertainty are omnipresent and acutely felt, particularly by Black Americans and other communities of color. Orchestrating integrated supports that systematically assess students' comprehensive needs and strengths and coordinate resources in a unified and collaborative way is essential. Such a system can mitigate barriers, enhance coping, strengthen resilience, re-engage disconnected students and families, and help reduce the opportunity gaps.

The community school approach highlighted in the vignette above shows some of the ways that schools can create a coherent web of experiences and structures that enable students' academic success, healthy development, and well-being. Other approaches to school designs, structures, and practices can similarly advance an integrated approach to supporting learners. Regardless of their distinct approaches, schools with integrated support systems create ongoing opportunities for connection and for identifying students who need assistance, taking care to include students who are English learners, are experiencing homelessness, are undocumented or from mixed-immigration-status families, have a disability, live in rural areas, or are impacted by the juvenile justice or foster care systems.

Why Integrated Support Systems Are Important: What the Science Says

Healthy human development depends on nurturing contexts. Human development is shaped by the ongoing interactions between individuals' biology, relationships, and cultural and contextual influences. Most of the brain's growth happens after we are born. The tissue that it is composed of is more susceptible to change from experience than any other tissue in the human body. The brain's architecture is made up of trillions of connections, forming complex and integrated structures that experiences create, strengthen, and reorganize to develop new skills and competencies. It becomes highly connected, efficient, and specialized over time based on the web of experiences in children's lives. The brain is astonishingly malleable, and our growth and development are highly "experience dependent." Thus the context of development is extremely important.

The domains of development are interconnected. No part of the brain develops in isolation: There is no separate "math" part of the brain or "emotions" part of the brain. Academic learning

is tightly intertwined with social and emotional experiences, mental health, and physical health. This means that schools must be prepared to address a variety of individual needs and barriers with supports that are holistic and personalized to fully meet students where they are.

Adversity-related stress is the most common factor that negatively affects contexts for development. When we experience stress, the hormone cortisol is released through our brains and bodies, producing that familiar feeling of fight, flight, or freeze. This mechanism is intense when it happens, but if the stress is mild or tolerable, it is actually adaptive—that is, it makes us alert and sharp and helps us prepare for an event like a test or a performance. This is the limbic system at work—attention, concentration, focus, memory, and preparation. But when children have high levels of continuous stress, and that stress is not buffered by the presence of a trusted adult, something else happens. Children can get locked in a condition of toxic stress, which has biological, psychological, and developmental effects as cortisol damages the structures in the limbic system and creates feelings of fight or flight, hypervigilance, and high levels of anxiety.

Relational trust is the most powerful element of a positive context. The emotions that positive relationships generate are caused by another hormonal system which is mediated by the hormone oxytocin. This hormone produces feelings of trust, love, attachment, and safety. Oxytocin hits the same structures of the brain as cortisol, yet oxytocin is more powerful because it can literally protect children, at the cellular level, from the damaging effects of cortisol. Relationships that are strong and positive cause the release of oxytocin; this not only helps children manage stress, but also offsets the damaging effects of cortisol and produces resilience to future stress. When we speak about the human relationship (see "Positive Developmental Relationships" for more), we are not just talking about being nice to a child. We are speaking of a close connection that supports the release of oxytocin as it is built through consistent caring, protection, presence, and trust.

Today, stress is everywhere. Stress caused by adversity is not something some children have and others do not. It exists along a spectrum of different intensities for children at different times in their lives. However, many children are attending schools where their health and their ability to focus and concentrate will be affected by the stressful contexts of their lives unless they have mediating relationships and opportunities to learn how to manage stress. Today, because of the pandemic and the many experiences of racialized violence, many children's stress mechanisms are on high alert, especially if they have experienced previous trauma. These stress responses can manifest as fatigue and detachment at the mild end, or impulsive, distractable, or angry behavior at the more extreme end.

Discrimination and inequality create increased risks. While adversity and healthy development are faced in all communities, inequality creates increased risks. Poverty and racism, together and separately, make the experience of chronic stress and adversity more likely. The events of 2020 have made this reality even more apparent. Throughout the COVID-19 pandemic, children and families of color, as well as those in low-income communities, have experienced greater infection and mortality rates, higher unemployment, more housing and food instability, and less access to technology and the internet. The ongoing displays of racial violence have also put a spotlight on the persistent effects of systemic racism and reignited the collective, individual, and intergenerational trauma that U.S. citizens, particularly Black Americans, bear as a result of our nation's embedded systems of power and oppression. These are also the communities that have been under-resourced over many years.

Integrated support systems can counteract these conditions by reducing stigma and judgment around support and empowering young people on their own pathways. Too often, schools assume "some" students will have issues, label them, and create isolated programs, but when schools establish environmental conditions for all students' learning and support, they validate students' rights to wellness and destigmatize the need for assistance.

What Can Schools Do to Create Integrated Support Systems?

Many schools in the United States are designed with the assumption that students begin and continue their education in a state of physical and emotional well-being with the necessary skills, mindsets, and experiences to prepare them for school and rich learning experiences. This is rarely true. Most children experience adversity in some form at some point in their lives and need opportunities for learning and supports that enable them to thrive. Indeed, each year in the United States, at least 46 million children are exposed to violence, crime, abuse, or psychological trauma, representing more than 60% of the total.

Thus, learning environments need to be set up with many protective factors, including health, mental health, and social service supports, as well as opportunities to extend learning and build on interests and passions. Having comprehensive and integrated supports in place can allow schools to build on students' unique needs, interests, and assets and address their areas of vulnerability without stigma or shame, responding in a sensitive and timely manner to within-school and out-of-school contexts. In addition, students will have different needs at different times. Both new structures and new practices may be needed to meet these needs:

Having comprehensive and integrated supports in place can allow schools to build on students' unique needs, interests, and assets and address their areas of vulnerability without stigma or shame, responding in a sensitive and timely manner to within-school and out-of-school contexts.

- **Structures that incorporate universal and tiered supports include:**
  - assessments that help educators understand student wellness and progress and the supports students need;
  - availability of high-quality tutoring and mentoring, counseling, and student support teams;
  - additional before, during, and after-school time for expanded learning, along with summer programs or Acceleration Academies during intersessions; and
  - health, mental health, and community partnerships with social service providers, including community school models.

- **Practices that enable these structures to be effective include:**
  - strategies and practices that ensure collaboration, coordination, and shared developmental approaches across providers of services; and
  - approaches that are culturally competent, carefully integrated, and age appropriate, considering students holistically and with an assets-based lens.

While most practitioners acknowledge that all children and youth need a system of supports with these features, current systems have difficulty meeting learner needs, especially in schools serving families of color and families from low-income backgrounds. Among the many concerns raised by the current state of affairs are that student and learning supports are often:

- narrowly framed, uncoordinated, and implemented in silos;
- mainly designed as out-of-classroom referrals;
- ineffective in monitoring the progress and advancement of students;
- inadequate to serve most of the growing number of students in need;
- misaligned with the strengths and needs of individual learners;
- unable to provide timely help; and
- ineffective in working with home and community resources.

Building a unified, comprehensive, and equitable system of supports requires coalescing many of the piecemeal policies and practices that have been added onto the edges of traditional school structures. Integrating these supports into the normal work of the school can increase the likelihood that a school will be experienced as a welcoming, supportive place that accommodates diversity, enhances young people's strengths and resilience, and is committed to ensuring equity of opportunity for all.

Creating Comprehensive, Multi-Tiered Systems of Support

In recent years, many schools have sought to create integrated support systems by building multi-tiered systems of support (MTSS). MTSS typically include three tiers of support that promote learning and development in ways that prevent difficulties and provide supplemental supports and intensive intervention where needed.[3] Tier 1 is **universal**—everyone experiences it. Ideally, schools are designed to foster developmental relationships and teaching strategies grounded in Universal Design for Learning that are broadly successful with children who learn in different ways, as well as positive behavioral support strategies that are culturally and linguistically competent. Tier 2 includes **supplemental services** and supports that address the needs of students who are at some elevated level of risk. The risk may be demonstrated by behavior (e.g., number of absences), by academic struggles (e.g., difficulty reading), or by having experienced a known risk factor (e.g., the loss of a parent). Tier 2 services could include academic supports (e.g., Reading Recovery, math tutoring, extended learning time) or family outreach, counseling, and behavioral supports. Tier 3 involves **intensive interventions** for individuals who are at particularly high levels of risk or whose needs are not sufficiently met by universal or supplemental supports. Tier 3 supports might include additional social, health, or mental health services, as well as academic supports such as effective special education.

Interventions are tiered, not students, and supports can and should be provided in typical school environments. Students are not "Tier 2" or "Tier 3" students; they receive services for as long as needed but no longer. Providers should recognize that students have strengths in many areas and build upon student assets, not just focus on areas for growth. It is particularly important that Tier 2 and 3 services be implemented in a child- and family-sensitive manner that is culturally affirming. This can maximize engagement and minimize errors that occur when students, families, or teachers are not asked about their context and needs. Interventions should minimize removal from the mainstream classroom or extracurricular environments. These supports are often enhanced by collaboration with local service agencies and community-based organizations, with communication feedback loops to school-based staff. The key is to take a whole child approach in which students are treated in connected, rather than fragmented, ways, and care is personalized to the needs of individuals.

While MTSS do not encompass all that is needed for transforming how schools address barriers to learning, development, and teaching, researchers at the Center for Mental Health in Schools and Student/Learning Supports at UCLA suggest that schools can build such systems to implement a continuum of supports built on an intertwined set of home, school, and community resources to advance student learning and well-being in collaborative ways.

Schools can build such systems to implement a continuum of supports built on an intertwined set of home, school, and community resources to advance student learning and well-being in collaborative ways.

To organize the many learning supports across the continuum, the center's researchers suggest that interventions can be organized into a set of six domains:

- **Embedding student/learning supports into regular classroom strategies**, which enables teachers and student support staff to (a) work collaboratively to ensure instruction is personalized, with an emphasis on enhancing intrinsic motivation and social and emotional development for all students, especially those manifesting mild to moderate learning and behavior problems; (b) re-engage those who have become disengaged from instruction; (c) provide learning accommodations and supports as necessary, using Response to Intervention strategies in applying special assistance; and (d) address external barriers with a focus on prevention and early intervention.
- **Supporting transitions**, such as assisting students and families as they negotiate the many hurdles related to re-entry or initial entry into school, both routine school and grade changes as well as the more frequent changes often faced by students in foster care or experiencing homelessness. Other support may be needed for daily transitions, program transitions, and transitions associated with accessing special assistance.
- **Increasing home and school connections and engagement**, addressing barriers to home involvement, helping those in the home enhance supports for their children, strengthening home and school communication, and increasing school support of the home and home support of the school.

- **Responding to and, when feasible, preventing school and personal crises** by preparing for emergencies, implementing plans for when an event occurs, countering the impact of traumatic events, providing follow-up assistance, implementing prevention strategies, and creating a caring and safe learning environment.
- **Increasing community involvement and collaborative engagement** by developing greater community connection and support from a wide range of resources—including enhanced use of volunteers and developing a school–community collaborative infrastructure.
- **Facilitating student and family access to special assistance**, first in the regular program and then, as needed, through referral for specialized services on and off campus.[4]

Through enhanced MTSS approaches characterized by these features, schools can create more unified and collaborative systems that can be used to prevent, as well as mitigate, challenges.

Assessing student strengths, challenges, and needs

In addition to formative assessment tools for gauging learning progress, it is important to use tools that help schools regularly assess student wellness and the supports students need.

To create meaningful support systems for learners, educators need to know what students are experiencing, and schools need to be able to identify the supports students need, when they need them. Structures and practices related to assessment of both wellness and learning can provide actionable guidance. These assessment processes should provide insights into:

- students' individual strengths and struggles;
- patterns across grade levels and content areas; and
- school and community resources that should be accessed to meet individual and collective needs for programs and services.

With data like these in hand, practitioners can better understand how to improve the coordination and integration of school and community resources and establish priorities for strengthening supports and filling intervention gaps.

The Boston College Center for Optimized Student Support has produced an assessment tool informed by its 20 years of experience implementing its rigorously evaluated and effective City Connects program with 15 diverse districts. This tool helps practitioners build comprehensive, data-informed, and tailored systems to meet students' varied needs. It does so by guiding practitioners through a series of self-assessments and prompts that allow them to take stock of the resources, personnel, and infrastructure they have in place and to identify ways that their systems can be improved.

Complementing systems assessments with those that provide insights into students' needs and assets is also key. Measures of social, emotional, and academic well-being, such as those created by California's CORE Districts and Kaiser Permanente's Resilience in School Environments (RISE) Index, can be helpful both at the start of school and throughout the year for understanding where students are and what strengths and struggles they have. The use of these tools, coupled with teachers' daily observations and the knowledge gained through relationships, can help practitioners

to understand student experiences, surface considerations of what students have had the opportunity to learn and under what conditions, and connect students to the appropriate supports within school and community systems.[5]

Schools should also have data systems in place that allow for continuous feedback loops that are understandable, timely, and instructive. Some districts are pioneering new digital solutions to offer feedback to school leaders and educators about students' social and emotional and additional learning needs. California's CORE Districts partnered with Education Analytics to provide districts across the state with a new interactive platform, Rally, that helps teachers and school leaders track data on students' well-being and academic progress by putting multiple sources of available data in a dashboard that teachers can regularly look at for each student and across their class. The data include short surveys of student wellness along with data from diagnostic assessments of learning. The goal is to support teachers in their responses to the unique needs of each individual student and to address the trauma that many students experience.

Assessment structures and systems are only impactful insofar as they are supported by practices that allow educators to make sense of data and to identify appropriate and impactful supports. In particular, it is critical that educators and other adults collaborate to analyze data and identify effective interventions to support all students while keeping a keen eye on those who have unique learning needs, including English learners, students experiencing homelessness, students with special needs, and those in foster care.

Assessment structures and systems are only impactful insofar as they are supported by practices that allow educators to make sense of data and to identify appropriate and impactful supports.

Providing universal supports

Tier 1 universal supports should include opportunities for relationship-building and inclusive teaching strategies that advance learning and growth for all students.

As we have described in other sections and highlighted in the vignette on Social Justice Humanitas Academy, there are a number of structures and practices, often referred to as Tier I in MTSS, that make the core work of the school supportive for students.

Universal support can be enabled through **relationship-building structures**, such as advisories, teaching teams, and looping, that enable staff to know their students well, and structures that allow staff to use observations and data to understand student needs, such as assessment tools and collaboration time dedicated to discussing student needs. (See "Positive Developmental Relationships" and "Environments Filled With Safety and Belonging" for fuller treatment of these structures.)

Collaboration structures both among staff and between staff and families are critically important to the provision of effective supports. Family communications benefit from consistent structures that help practitioners connect and communicate with families, such as regular phone calls or emails, home visits, and video or in-person conferences, that allow for home–school connections,

relationship building, and collaborative conversations around how to support students and their growth. In secondary schools, advisory systems are essential to allow effective communication, since it is not reasonable to expect each content teacher to communicate with 100–200 families (depending on their pupil loads), but it is possible for each of them to host an advisory of 15–20 students as an intrinsic part of their teaching load (replacing a content course) and be the point person for communication with those students' families.

Educators at Social Justice Humanitas Academy illustrate this role in their "Very Important Person (VIP)" meetings when an advisor, counselor, administrator, and/or other teacher convene with a student and his or her family to examine data (for example, on attendance, behavior, class performance, or other needs) and determine how to address any challenges that may be surfacing. Informed by previous meetings with other teachers who share that student, team members attempt to figure out what is happening inside or outside of the school that might be contributing to or hindering a student's achievement and build a joint plan for support.

Ongoing opportunities for teachers and school staff to meet within grade levels and subject areas to share their knowledge about students and how to best support them are also important. Collaboration structures like these are most successful when educators share information about students in ways that are focused on building success rather than naming deficits. That is, their conversations do not identify the student as a problem but rather configure their concerns as a situation that can be supported by leveraging and strengthening relationships. (See "Collaborating to Support Students at Oakland International High School.")

Collaborating to Support Students at Oakland International High School

At Oakland International High School, a school for recent immigrants in Oakland, CA, approximately 29% of students arrived in the United States as unaccompanied minors and 33% were identified as homeless in 2019. Some have lost family members to violence; some come to school hungry; some face risks simply getting to and from school. All are English learners, and most live in poverty. Across the country, most students like them experience limited learning opportunities and barriers to success at school. But Oakland International students thrive at surprisingly high rates. In 2019, the most recent year of data available, 93% of students had graduated within 5 years, and 59% were deemed prepared for college and careers, with a majority having taken and passed the rigorous A–G courses required for admission to California state universities. This compares to a graduation rate of only 62% and a college and career readiness rate of only 26% overall for other English learners in Oakland Unified.

Why the difference? As a community school, Oakland International High School has an integrated focus on academics, health and social services, youth development, and engagement with families and communities. The school directly addresses the out-of-school barriers to learning faced by recently arrived immigrant students. Available supports include free legal representation to students facing deportation, after-school tutoring, English as a second language (ESL) classes for parents (provided by the nonprofit Refugee Transitions), mental health and mentoring services at the school wellness center, medical services at a nearby high school health clinic, and an after-school and weekend sports program run by Soccer Without Borders.

The school also relies upon its collaboration structures to ensure it is meeting students' needs. Like other schools affiliated with the Internationals Network, Oakland International High School is designed so that grade-level teaching teams composed of a math teacher, an English teacher, a social studies teacher, and a science teacher share a group of students and meet at least weekly as a team, along with the counselor attached to that cohort, to discuss their common students and their interdisciplinary curriculum planning.[6]

The school's attention to collaboration also extends to families and communities. To engage families as partners, Oakland International teachers and staff conduct at least two home visits each year to develop relationships with families, and they encourage and support parent participation on school teams that develop programs and determine budgets. Staff also participate in immersive "community walks" designed by parents, students, and community leaders in which they visit important landmarks and meet with community leaders and families.

Community members also serve on the school's site leadership team and the Coordination of Services Team, which help determine the best supports for students and families. Team members review student attendance and other data sources each week to determine which students would benefit from case management, home visits, or other interventions. Because the school values the knowledge and engagement of families and community members, the school climate is infused with trusting relationships that support student well-being.

Oakland International High School is just one of many community schools across the United States that have found a way to become a true hub for the communities they serve and to provide students, families, and staff with the support they need to be successful.

Sources: Adapted from Coalition for Community Schools. (2017). *2017 community schools award profiles*; Maier, A., & Levin-Guracar, E. (n.d.). *Performance assessment profile: Oakland International High School*. Learning Policy Institute. Outcome data from California Department of Education School and District Dashboards.

Schools that foster a **shared understanding of development** also enable educators to provide universal supports to all students. These shared developmental frameworks help practitioners to think about students holistically and nurture them in the same way, providing consistency and safety in school interactions.

A Shared Developmental Framework in the School Development Program

The School Development Program (SDP), developed by Dr. James Comer of Yale University, enables schools to adopt and implement a shared developmental framework by educating principals, parents, teachers, community leaders, and health care workers about child development and establishing mechanisms for collaborative working relationships among them. Building upon these relationships to address six developmental pathways—social-interactive, psycho-emotional, ethical, cognitive, linguistic, and physical—the program enables all parties to become knowledgeable about and supportive of child development in nonpunitive ways. Research on the SDP shows that it helps reduce absenteeism and suspension, improves school climate and relationships among students and teachers, increases student self-competence and self-concept, and strengthens achievement.[7]

Source: Adapted from Darling-Hammond, L., & Cook-Harvey, C. M. (2018). *Educating the whole child: Improving school climate to support student success*. Learning Policy Institute.

Universal supports are also made effective through the implementation of pedagogical practices based on Universal Design for Learning and culturally responsive pedagogies that make content accessible to a wide range of learners. (See "Environments Filled With Safety and Belonging" and "Rich Learning Experiences and Knowledge Development" for a fuller treatment of these practices.)

Providing supplemental supports

Tier 2 supplemental supports that address both academic and non-academic needs should be readily available and easily accessed.

Universal supports—including shared developmental frameworks, student-centered observations, and collaborative processes—also help surface the additional supports that may be needed both for academic progress and for social, emotional, and cognitive development. These additional supports, often termed supplemental supports or Tier 2 interventions, provide students with targeted supports that can address their distinct, personalized needs.

There are several structures that schools can put in place to ensure that supplemental supports are available for the young people who need them. Schools may have **dedicated personnel**, like learning specialists, counselors, or social workers, on-site to provide supplemental supports in classrooms or in established resource rooms to provide extra help. Schools can also **dedicate time** for students throughout the school day to receive additional academic support. This can take the form of flexible scheduling opportunities, like holding open office hours or having dedicated class periods during which students and educators can come together to work through course material or other learning challenges, as well as expanded learning time available after school, in tutoring blocks, or in the summer. (See "Meeting Student Needs With Tier 2 Supports" for a closer look at how supplemental supports can be mobilized to address emerging concerns.) As we illustrate below, the practices used within these structures need to be informed by strong pedagogical knowledge; affirming relationships; and approaches that are focused on engagement, acceleration, and support for student agency, rather than stigma and remediation.

Meeting Student Needs With Tier 2 Supports

Ms. Johnson, a 4th-grade teacher at Garden Street Elementary School in Brewster, NY, left her previous school because she felt isolated in her efforts to address the multifaceted needs of her students, particularly those with more significant needs. Her experience at Garden Street has been quite different, starting with the ongoing professional development that is provided to staff for understanding and supporting the varying academic, behavioral, and social and emotional needs of all students. She began her first school year at Garden Street supported in a culture of collaboration and equipped with a clear understanding of how to effectively navigate the tiered support system to best serve the diverse needs of her new 4th-grade class.

By the end of October, Ms. Johnson had become increasingly concerned about a student in her class named Keisha. She was articulate and creative, possessing a confidence that surpassed her 9 years. However, Keisha's mother informed Ms. Johnson that Keisha's father had been incarcerated over the summer, and Keisha was reluctant to discuss the situation with anyone. Despite performing well in previous grades, Keisha was beginning to receive lower marks in several subjects as her effort diminished, and she was occasionally removed from class to address her

challenging behavior. Her behavior was also causing disruptions for other students in the classroom. She frequently had verbal disagreements with classmates and, on occasion, spoke disrespectfully to Ms. Johnson, despite their positive relationship. Ms. Johnson recognized these changes as "indicators of need" for Keisha, which prompted her to begin the process of submitting a referral to the school's Tier 2 Kid Talk Team.

Next, Ms. Johnson observed and collected the necessary data and background information and submitted the referral form to the "Kid Talk" lead before the team meeting. During the meeting with other grade-level staff members, Ms. Johnson identified Keisha's strengths as well as her concerns, and collaboratively discussed a plan for support. As a result, Keisha was enrolled in the school's 10-week support group for students of incarcerated parents. To help Ms. Johnson provide a supportive environment, the school offered some additional resources to enhance her developing understanding of the connection between Keisha's anger over her father's sudden absence and the shift in her behavior and learning. Ms. Johnson was also provided some additional strategies in class to help Keisha de-escalate and just "take a break" when needed. Ms. Johnson felt confident in implementing the supports suggested, with a plan to monitor Keisha's academic and behavior concerns and report back to the team the next month. Ms. Johnson was able to provide a range of supports to address Keisha's multiple needs so that Keisha could re-establish a more positive set of relationships and behaviors in school.

Source: Adapted from Turnaround for Children. (2020). *Tiered Supports: Educational Practice Toolkit 6.1*.

It is also important to have additional support readily available. Rather than engaging in tracking, which differentiates students' access to quality curriculum and has been found to depress the achievement of low-tracked groups,[8] providing access to **high-quality tutoring** opportunities is an effective means for schools to provide supplemental supports. There is a well-established literature on the positive effects of tutoring, which can produce large gains that can be achieved cost-effectively both in person and virtually.[9] Effective tutoring is accomplished not by a cadre of ever-changing, untrained volunteers, but by a focused group of trained individuals working consistently with individuals or small groups of students. In particular, research supports high-dosage tutoring in which tutors work consistently at least 3 days per week for full class sessions (during or after school) with students one-on-one or in very small groups, often accomplishing large gains in relatively short periods of time.

These may be specially trained teachers, as in programs such as Reading Recovery that use a set of well-defined methods one-on-one or in small groups and have been found to have strong positive effects on reading gains for struggling readers,[10] including students with special education needs and English learners.[11] (See "Targeted Literacy Supports in Gridley Unified.") They may also be recent college graduates, including AmeriCorps volunteers, who receive training to work with students, as in the Boston MATCH Education program. In daily 50-minute sessions added to their regular math classes, two students working with a tutor gained an additional 1 to 2 years of math proficiency by focusing on the specific areas they needed to master while also preparing for their standard class. Tutors in programs such as these have the advantage of a well-developed curriculum with frequent formative assessments to gauge and guide where support is needed.[12]

Targeted Literacy Supports in Gridley Unified

Selected as a "positive outlier" in a recent study of California districts whose Black, Latino/a, and White students outperformed their peers, Gridley Unified School District serves just over 2,000 students across five schools in a small rural town in the upper Sacramento Valley. Key to the district's performance in English language arts is the range of interventions it has in place to support early literacy. The foundation for strong intervention and support begins with 1st-graders at the k–1 primary school.

The school seeks to establish a strong culture of reading early on, engaging parents so that they create habits at home, as noted by the school's principal: "We set the tone early.... In 1st grade they have to go home and read 20 minutes a night. They need to practice.... We just kind of build that in, ... that [reading] is just what we do here. This is what we do in Gridley." The school also has a strong base in Reading Recovery. Students receive an initial assessment to identify their progress, and as needed, they receive Reading Recovery tutoring, which provides 30-minute one-on-one reading instruction daily.

In grades 2–5 at the district's elementary school, a two-person reading specialist team assesses every student in the school three times per year for areas needing skills support. The team also assigns targeted intervention or instruction, designates English language development group work, and provides additional resources to students' primary classroom teachers. By assessing every student and working with as many as possible (around 150 of 600 students), the team identifies literacy issues early, and skills-specific reading support is normalized as part of elementary education.

Gridley's middle school offers several tiers of support. Every student has a 5th-period class during which they receive learning support in either mathematics or English language arts or take an enrichment class determined based on needs identified through benchmark assessments. Students can rotate among classes every 6 to 8 weeks as they make progress on the identified skills. Supplementary support is also provided through extended English language arts blocks for students needing additional support. English learners participate in one of three levels of designated English language development. The school also offers additional support for promising students in high school through Advancement Via Individual Determination (AVID) classes that teach study skills and support success in college preparatory classes.

Source: Adapted from Burns, D., Darling-Hammond, L., & Scott, C. (with Allbright, T., Carver-Thomas, D., Daramola, E. J., David, J. L., Hernández, L. E., Kennedy, K. E., Marsh, J. A., Moore, C. A., Podolsky, A., Shields, P. M., & Talbert, J. E.). (2019). *Closing the opportunity gap: How positive outlier districts in California are pursuing equitable access to deeper learning*. Learning Policy Institute.

Extended learning time (ELT) is another school structure that can enable important supplemental supports during out-of-school time. After-school programs are a common way ELT is incorporated into a school's system of supports. Bridge programs offered during school breaks can also allow expert teachers to work with small groups of students, helping them both catch up and look ahead in specific skill areas.[13] In addition, ELT includes summer learning programs, which have been found to be most effective when they offer nonacademic enrichment along with academic supports, use a trained group of stable staff, are experienced for multiple summers, and provide a purposeful curriculum.[14]

These ELT opportunities can accelerate learning and reduce opportunity gaps between what students from low-income families and their peers from middle- and upper-income families experience during out-of-school hours. Yet additional time will not in and of itself promote positive student outcomes; additional learning time must be characterized by high-quality and meaningful practice in order to move the needle on student achievement and engagement.[15] For example, when ELT programs reinforce a school's curriculum, pedagogy, and core values, they are more effective in supporting student outcomes, growth, and engagement. (See "Aligning Extended Learning Time With Classroom Instruction in Meriden.")

These extended learning time opportunities can accelerate learning and reduce opportunity gaps between what students from low-income families and their peers from middle- and upper-income families experience during out-of-school hours.

Aligning Extended Learning Time With Classroom Instruction in Meriden

Meriden Public Schools District in Connecticut has integrated extended learning time with traditional instruction. In 2012, the superintendent and the local teachers union in Meriden partnered with the YMCA and the Boys & Girls Club to add 100 minutes per day (roughly equivalent to 40 additional school days annually) of personalized learning time at three low-performing schools. The three participating schools re-engineered their schedules to include an enrichment block, during which community partners staff the classrooms as teachers and provide instruction in three key enrichment areas: healthy living, literacy, and STEM. A key component of Meriden's after-school program is that staff at the community organizations work closely with teachers to align after-school activities with learning during the traditional day and with the schools' instructional goals. Additionally, the participating schools include community partners in professional learning communities with school staff. This type of collaboration between teachers and providers of ELT ensures that additional learning time is strongly linked with the learning opportunities during the school day and that all learning opportunities complement one another in service of supporting primary instructional goals. The results in Meriden were promising: Two of the three participating schools saw gains in attendance rates, core subject test scores, and teacher ratings, which exceeded districtwide averages.

Source: Adapted from Darling-Hammond, L., Schachner, A., & Edgerton, A. K. (with Badrinarayan, A., Cardichon, J., Cookson, P. W., Jr., Griffith, M., Klevan, S., Maier, A., Martinez, M., Melnick, H., Truong, N., & Wojcikiewicz, S.). (2020). *Restarting and reinventing school: Learning in the time of COVID and beyond*. Learning Policy Institute.

ELT opportunities are also more impactful when they incorporate deeper learning practices that engage youth in meaningful content that is connected to students' lives outside of school. Citizen Schools (CS) is an example of ELT programming that engages deeper learning pedagogies for students and generates powerful results for learners.[16] CS youth participate in apprenticeships that consist of hands-on learning projects led by volunteer citizen teachers. Apprentices work in small groups to do project-based work such as litigating mock trials, publishing children's books, and building solar cars. These apprenticeships are complemented with activities that help students develop their organizational and study skills, along with homework help. Programs culminate with opportunities for participants to publicly present their projects.

Deeper learning practices that emphasize culturally relevant learning that increases student participation and motivation are also important features of extended learning opportunities. (See "Culturally Relevant Learning in Freedom Schools" for a closer look.)

Culturally Relevant Learning in Freedom Schools

A summer program associated with the Children's Defense Fund (CDF) Freedom Schools illustrates how culturally relevant learning can be infused into extended learning opportunities. CDF Freedom Schools are modeled after the 1963 Mississippi Freedom Schools, which sought to invest in communities by developing leaders who could exercise their political power. CDF Freedom Schools partner with community organizations, churches, and schools to provide literacy-rich summer programs for k–12 students. Programs vary in length from 5 to 8 weeks and include a curriculum designed to promote cultural and historical consciousness. The program incorporates five content areas: social action and civic engagement, intergenerational leadership, nutrition and health, parent and family involvement, and academic enrichment.

A typical CDF Freedom School day begins with a community meeting called Harambee (a Kiswahili word that means "let's come together"). This is followed by a 3-hour block of literacy instruction during which students engage with the Integrated Reading Curriculum (IRC). The IRC incorporates a carefully selected array of books that reflect a wide variety of cultures and experiences as well as activities that are designed to be engaging and develop students' love of reading. Afternoons are dedicated to activities related to the themes included in the IRC. Social action and community service are key components of CDF Freedom Schools. At the start of the program, staff and students work together to identify issues affecting their community, and throughout the course of the program, students develop and implement a social action plan to address the community issues they identified. These social action projects embody a foundational idea that the CDF Freedom Schools work to instill in students: I can and must make a difference. A multiyear evaluation reported that participation in CDF Freedom Schools was associated with positive character development outcomes and achievement on standardized reading tests.[17]

Source: Adapted from Darling-Hammond, L., Schachner, A., & Edgerton, A. K. (with Badrinarayan, A., Cardichon, J., Cookson, P. W., Jr., Griffith, M., Klevan, S., Maier, A., Martinez, M., Melnick, H., Truong, N., & Wojcikiewicz, S.). (2020). *Restarting and reinventing school: Learning in the time of COVID and beyond*. Learning Policy Institute.

Providing intensive supports and interventions

Tier 3 supports and interventions should orchestrate programs and partnerships to provide highly personalized and well-integrated supports for learning and well-being.

An integrated support system should have individualized supports in place that can provide more intensive intervention for learners when needed. These supports, often known as Tier 3 interventions, are pursued when it becomes evident that universal and supplemental supports are not adequately supporting a young person's academic growth or well-being and can include assistance from outside agencies. Having strong Tier 3 interventions in place helps to enable access to comprehensive and personalized services that can meet students' varied needs.

These interventions should include individualized opportunities for increased academic support as well as access to social, emotional, and physical and mental health services depending on a learner's areas of strength and struggle. In addition to supporting a young person's healthy development, these interventions can mitigate the effects of trauma and promote healing for those with prolonged exposure to stress and adversity, including those facing racial violence and poverty and the housing, health, and safety concerns that often go with them. (See "Individualized Supports in Ms. Harris's Classroom" for an example of how increasing levels of intervention can be accessed in a school setting.)

Individualized Supports in Ms. Harris's Classroom

Ms. Harris's classroom provides a window into how increasing levels of support and intervention can be collaboratively identified to meet the individual needs of learners in an elementary setting.

Ms. Harris perceived that Eriyanna initially appeared to have low motivation for improving her reading and a fairly high level of avoidance motivation for reading. Most of the time during reading instruction she seemed to be disengaged and often acted out.

Matt seemed highly motivated to do whatever was prescribed to help him learn to read better, but his motivation started to disappear after a few weeks of hard work. He seemed to have trouble persevering, and as his engagement waned, he tended to misbehave.

José had just transferred into the school and was having problems adjusting to the classroom activity and demands.

Ms. Harris asked the school psychologist to spend some time in her class collaborating on strategies to help her learn how to support these students and some others more effectively. They worked out specific plans for enhancing students' motivation, re-engaging those who had disengaged, and addressing needs such as missing prerequisite readiness skills. This was sufficient to help Eriyanna and Matt, but José needed something more.

The psychologist took time to sit down with José in class and ask what was going on. José indicated that some classmates were picking on him. He also said he was having trouble with reading and was generally unhappy at school. Ms. Harris and the psychologist decided that a volunteer trained and supervised by the psychologist would be assigned to provide tutoring and additional support with a specific focus on social and emotional concerns. As José warmed to the volunteer, he began to talk about trauma he had experienced before he came to the United States. The volunteer informed the psychologist, who made an independent assessment and concluded there was a clear need for therapeutic intervention. The psychologist made a referral and coordinated a plan of action between the therapist and the involved school staff. A priority was placed on ensuring that José would have a safe, supportive environment at school. Over the ensuing months, José indicated that he felt more secure; those working with him perceived a similar change. As the volunteer working with him put it, José was now "shining and looking brilliant."

Source: Vignette provided by Howard Adelman from the Center for Mental Health in Schools and Student/Learning Supports at UCLA.

A number of structures help schools integrate services and interventions by linking them to a range of academic, health, and social services. Prominent among these are approaches that enable the **coordination of services**, which can help to ensure access and responsiveness. Some of these practices relate to routines that allow educators, families, and other stakeholders to regularly discuss how learning and well-being are being supported. **Regular check-ins or meetings** across teams, roles, and stakeholders can enhance this kind of consistent communication and data exchange. Internal structures like these create opportunities to ensure that students have access to what they need when they need it and to elucidate areas where additional interventions may be appropriate.

Partnerships between schools and nonprofits also support greater coordination and access to services, youth development programs, and academic and cultural enrichment. The Boston College Center for Optimized Student Support is one such example, as it has partnered with schools in building and sustaining integrated support systems through City Connects. (See "How Integrated Support Systems Operate in Schools Working With City Connects.") Communities In Schools (CIS) is another well-established program that helps schools integrate student supports by leveraging community-based resources. To do so, CIS places a full-time site coordinator at each school who cultivates the community relationships needed to develop and implement services in an effective and integrated way. In addition, site coordinators conduct needs assessments at the beginning of the school year and then meet with partnering schools throughout the year to develop tailored plans to implement integrated support systems.

How Integrated Support Systems Operate in Schools Working With City Connects*

City Connects transforms existing student supports in a school and in the surrounding community into a system of care that addresses the strengths and needs of each student across all developmental domains. To date, City Connects has implemented its approach in 82 schools across 6 states, serving 26,045 students in 2018–19,[18] with positive effects on student achievement in participating schools.[19]

In its approach, City Connects creates a tailored plan of resources, opportunities, and relationships, with the goal of supporting each student to be ready to learn and engage in school. A coordinator, usually a school counselor or school social worker, meets with every teacher in the fall in a process known as "Whole Class Review." There is ongoing feedback and follow-up to ensure a responsive school environment and delivery of the right resources to the right student at the right time throughout the calendar year.

For example, through the City Connects Whole Class Review process, Jonah's 3rd-grade teacher at the Helen Keller School noted strengths and mild educational risk (Tier 2) when she met with the coordinator. Math and attendance were areas of strength for Jonah at the start of the school year. He was reading slightly below grade level. At times, he presented some challenging behaviors in the classroom. On the basis of this review, Jonah was referred to a small-group reading intervention and also to a social and emotional learning intervention.

Later in the fall, an additional need arose. Jonah's family was facing financial hardship, so they received donations from the school and from community-based holiday assistance programs. A need was also identified for seasonally appropriate clothing. A program that distributes supplies and clothing was able to provide Jonah with the warm winter clothing he needed as the seasons changed, along with books and personal care items. Over the course of the year, Jonah's behavior challenges escalated. The coordinator arranged school-based supports (classroom behavioral systems, meetings with the school-based behavior team, counseling) to help manage his oppositional behaviors and anger. The services were effective for Jonah; his behavior improved by the end of the year, and he needed less support as he developed more self-control and emotional awareness. Jonah made strong academic progress in the classroom and on statewide tests.

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Brielle's 2nd-grade teacher at the Dr. Vicente Gold School observed strengths as well as needs and indicated that Brielle could benefit from intensive interventions (Tier 3) when she met with the City Connects coordinator. An area of strength for Brielle was attendance; despite the family's struggles with homelessness and a move in the early part of the year, Brielle maintained good attendance. Family was another area of strength, with a parent advocating for Brielle throughout the school year. Brielle's classroom work was below grade level in both reading and math. She had significant behavioral challenges and poor personal hygiene. Her teacher noted that she was often tired in school and that she struggled with emotional regulation, often hitting adults and other children during outbursts, which were sometimes a result of being teased by peers for having dirty clothing.

Over the course of the school year, Brielle received many services to help support her needs, including reading interventions, out-of-school counseling services, and clothing resources. Building on the strong family involvement with the school, the coordinator arranged education for Brielle's parent on personal care for children. After these services were put in place, Brielle's behaviors improved. The coordinator observed that Brielle was coming to school with better hygiene. She was no longer having outbursts and made more friends.

As the school year continued, Brielle was able to make significant academic progress. She also demonstrated positive growth in behavior, with further reduction in behavior problems. Her teacher reported that she was able to express herself calmly in class, was developing stronger friendships, and appeared to be a happier child.

*Names of schools and children and some additional details have been changed to protect anonymity.
Source: Adapted from City Connects. (2020). *City Connects: Intervention & impact progress report 2020*.

In addition to partnerships, there are school models that incorporate integrated support systems as a characteristic feature of their designs. Prominent among these are **community schools**, which offer integrated student supports, expanded learning time and opportunities, family and community engagement, and collaborative leadership and practices.[20] These schools often draw on a wide range of community and cultural resources, including partnerships with families, to strengthen trust and build resilience as children have more support systems and people work collaboratively to help address the stresses of poverty and associated adversities children may face. Many community schools operate year-round, from morning to evening, serving both children and adults.

Community schools also have dedicated staff (e.g., community school director, family liaison) who support the coordination and sustainability of their various structures and programs. Community school personnel are typically part of the school leadership team and other governance bodies in the school. The community school manager or director generally conducts assets and needs assessments, recruits and coordinates the work of community resources, and tracks program data.[21]

There are several models of community schools, all of which have been adapted to respond to local assets and needs. Common models include the lead agency model, where community schools primarily partner with a community agency to build and sustain their approaches and their integrated support systems. (See "Partnering With a Lead Agency in a Community School.") Other models include those that are university-assisted, such as University-Assisted Community Schools with the University of Pennsylvania and the UCLA Consortium of Community Schools in Los Angeles, which includes the Social Justice Humanitas Academy featured in this section's opening vignette. There are also district-led community schools, like those in Oakland Unified School District (OUSD), where each school is a designated community school with a coordinator who helps organize and formalize partnerships that provide academic supports, mentoring, after-school programming, and mental health services. Schools in OUSD also benefit from 16 school-based health centers across the district that provide medical, optometry, mental health, health education, youth development, and dental services.[22] Finally, new approaches include county-organized networks of community schools, like those developed by Alameda and Los Angeles counties in California, orchestrating a range of federal, state, and county-provided services for students in a network of schools that also function as a learning community.[23]

Partnering With a Lead Agency in a Community School

Fannie Lou Hamer Freedom High School, located in the South Bronx (New York City) has partnered with the Children's Aid Society, a comprehensive New York City youth service provider, since 2006. Children's Aid Society is fully integrated into the life of the school, providing on-site supports and services such as an extensive extracurricular program and a Student Success Center (college access office). In addition, Fannie Lou students have access to comprehensive school-linked medical and mental health services (including a specialized teen clinic) through the Children's Aid Society Bronx Family Center, located three blocks from the school. Through a partnership with the Helen Keller Institute, free vision screenings and eyeglasses are available to any student who needs them, while a Children's Aid health educator and a full-time social worker provide support during the school day. An extended learning program focuses on youth development, including culinary arts and a student government engaging with local officials.

Source: Example provided by Jane Quinn, the former Vice President for Community Schools and Director of the National Center for Community Schools at the Children's Aid Society.

Evidence shows that community schools can improve outcomes for students, including attendance, academic achievement, high school graduation rates, and reduced racial and economic achievement gaps.[24] A recent study of New York City's community schools initiative, comprising more than 250 schools, found a drop in chronic absenteeism, with the biggest effects on the most vulnerable students, and a decline in disciplinary incidents, as well as higher rates of grade promotion, credit accumulation, and high school graduation.[25]

Community schools have been well positioned to support students through intense moments of crisis, including the recent obstacles posed by COVID-19. Early research suggests that with their integrated support systems and the various structures they have to support engagement and collaborative decision-making, community schools have been rapid responders, allowing them to provide families and students with much-needed supports.[26]

While schools can adopt varied structures and models to coordinate and implement integrated systems of support that provide increasing levels of intervention for students, it is important that approaches are culturally and linguistically responsive and asset-based.

While schools can adopt varied structures and models to coordinate and implement integrated systems of support that provide increasing levels of intervention for students, it is important that approaches are culturally and linguistically responsive and asset-based. In addition, schools must ensure that supports are available and organized in a non-stigmatizing fashion. Supports should be accessible in ways that do not create tracking or segregated learning spaces, and accessing them should be treated as the norm. These practices should extend to the approaches used to support students with special needs, who can receive individualized interventions through inclusion models that benefit all students and allow all to remain part of a broader community.

Summary

Comprehensive integrated support systems enable youth learning and well-being. There is no single way to create and sustain these systems, but key structures—including assessments and the implementation of universal, supplemental, and intensive supports—can bolster student learning and development, particularly when they are implemented in collaborative, culturally responsive, and coordinated ways. The development and sustainability of learning settings that create unified and integrated support systems has been ongoing across the country for decades. Several organizations provide districts and schools with resources that can guide them in this important endeavor. (See "Where to Go for More Resources.")

Where to Go for More Resources

Multi-tiered systems of support

- Rally Platform for Student Success (CORE Districts): Practitioners can use this interactive tool to support comprehensive data collection and analysis on students' holistic needs and assets. By displaying assessment data over the years, information about students' well-being, open-ended student quotes, and teacher notes, practitioners can gain more comprehensive background knowledge on students. Additionally, the platform incorporates equity pauses, which are brief activities that facilitate individual or collective reflection on students to help identify strategies that best support them.

- Center for Mental Health in Schools and Student/Learning Supports at UCLA: The center offers a wealth of free resources on its website, including a System Change Toolkit for transforming student and learning supports and Gateway to a World of Resources for Enhancing MH in Schools & Student/Learning Supports, which is a links "map" that facilitates various forms of networking and helps analyze strengths, weaknesses, and gaps or inequities in available resources. A core facet of the center's work is the National Initiative for Transforming Student and Learning Supports.

- National Center on Intensive Intervention: The center provides information and resources on effective academic and behavioral intervention programs, including research reviews of intervention programs, to assist with selecting an evidence-based approach matched to a school's or district's needs.

- Turnaround for Children: Turnaround produces research-based tools for educators, such as a toolkit on how to use a whole child vision to assess and plan for tiered systems of support and resources to inform a school crisis plan, to accelerate healthy student development and academic achievement. These include Tiered Supports, a toolkit to help educators use a whole child vision to assess and plan for Tier 2 and Tier 3 systems, and Responding to Crisis Within a Tiered Supports System, a collection of tools to build a school crisis plan, including engaging caregivers and families, monitoring for progress, and providing services and support.

- *Academic Success for All Students: A Multi-Tiered Approach* (Edutopia): This Edutopia video, and several other articles, highlights how a school in Florida is using a multi-tiered systems of support framework to meet the needs of every student.

- Integrate Student Supports With Schoolwide SEL (Collaborative for Academic, Social, and Emotional Learning): This resource provides guidance on how schools can integrate social and emotional learning into their multi-tiered systems of support framework.

Extended learning time

- How Learning Happens (Edutopia): This video series illustrates strategies that enact the science of learning and development in schools and other learning settings. It includes several video series on various topics, such as fostering positive relationships, cultivating a belonging mindset, developing foundational skills and academic confidence, establishing positive conditions for learning, and learning beyond the school day.

- A School Year Like No Other Demands a New Learning Day: A Blueprint for How Afterschool Programs & Community Partners Can Help (Afterschool Alliance): This blueprint offers building blocks for school–community partnerships to address equity and co-construct the learning day in the context of the COVID-19 pandemic.
- Afterschool Programs: A Review of Evidence Under the Every Student Succeeds Act (Research for Action): Based on a literature review of studies published since 2000, this review summarizes the effectiveness of specific after-school programs. The review uses the Every Student Succeeds Act (ESSA) evidence framework to assess the evidence of over 60 after-school programs. A companion guide provides profiles of each after-school program included in the review as well as studies of each program's effectiveness.
- *Getting to Work on Summer Learning: Recommended Practices for Success*, 2nd Ed. (RAND Corporation): Based on thousands of hours of observations, interviews, and surveys, this report provides guidance for district leaders and their partners for launching, improving, and sustaining effective summer learning programs.
- *Investing in Successful Summer Programs: A Review of Evidence Under the Every Student Succeeds Act* (RAND Corporation): This report provides current information about the effectiveness of summer programs for k–12 students to help practitioners, funders, and policymakers make evidence-based investments. The review uses the ESSA evidence framework to assess the effectiveness of summer programs and includes descriptions of 43 summer programs that align with ESSA evidence standards.

School-based health supports

- Whole Child Network (ASCD): The Whole Child Network offers a set of tools for practitioners to support students across ASCD's five whole child tenets: healthy, safe, engaged, supported, and challenged. These resources include a needs assessment survey, action guide, benchmarks for each tenet, and more.
- Collaborative for Academic, Social, and Emotional Learning (CASEL): CASEL offers a comprehensive collection of high-quality social and emotional learning tools and resources to inform and support educators, researchers, policymakers, and parents who are leading this work in the field.
- Healthy Schools Campaign (HSC): HSC aims to support schools in providing students with healthy environments, nutritious food, health services, and physical activity. HSC's resource center provides several tools that enable school districts, educators, and families to engage in this work, including advocacy guides and resources to incorporate health and wellness into schools.
- Rural Health Information Hub: The website contains a database of resources that can support practitioners who work in rural schools. Specifically, its resources can help leaders, educators, and other school-based personnel to build schools and systems that integrate services in ways that acknowledge and address the unique needs and infrastructure of rural communities.

- The Children's Safety Network (CSN): CSN works with state and jurisdiction Maternal and Child Health programs and Injury and Violence Prevention programs to create an environment in which all infants, children, and youth are safe and healthy.
- National Association of School Psychologists (NASP): NASP has made many handouts from its resource "Helping Children at Home and School III" freely available as a public service to provide parents and teachers with up-to-date information and proven, solutions-based strategies for home and classroom applications.

Community schools

- *What Are Community Schools?* (Partnership for the Future of Learning): This video describes the four key features of community schools, the importance of community school coordinators, and strategies for funding community schools.
- *Community Schools Playbook* (Partnership for the Future of Learning): This playbook provides model legislation, real-world examples, and many additional resources for state and local leaders who want to support community schools.
- On the Rise: Cincinnati's Community Learning Centers (Partnership for the Future of Learning): This film series highlights how Cincinnati's community schools, called "Community Learning Centers," are working to support students and families. The videos address several topics, including community engagement, community development, pathways for all students, and teaching partnerships.
- How to Start a Community School (Coalition for Community Schools): This toolkit provides information on how to implement a community school initiative and focuses on several topics, including vision and strategic planning, building a leadership team, needs and capacity assessments, sharing space and facilities, financing your community school, and research and evaluation.
- Scaling Up School and Community Partnerships: The Community Schools Strategy (Coalition for Community Schools): This interactive guide is intended to support communities in planning, implementing, and sustaining a community schools strategy.
- *Building Community Schools: A Guide for Action* (National Center for Community Schools): This guide provides information on several topics related to implementing and sustaining community schools, including key elements of community schools, models of community schools across the country, and case studies.
- National Center for Community Schools (NCCS): The focus of NCCS, a part of Children's Aid, is to build the capacity of schools and districts to work in meaningful long-term relationships with community partners. Since 1994, NCCS has developed a variety of free planning tools, implementation guides, videos, and other resources and has also provided intensive assistance (training, on-site consultation, and strategic planning facilitation) on a fee-for-service basis. NCCS is a founding and active member of the Coalition for Community Schools.

- Office of Community Schools (New York City Department of Education): The New York City Office of Community Schools runs the largest community school initiative in the country and offers a wide variety of well-developed, free resources for schools and community partners on topics ranging from proven strategies to reduce chronic absence to how to run weekly student support meetings.
- Coalition for Community Schools: Housed at the Institute for Educational Leadership, the Coalition for Community Schools leads advocacy and networking activities for the community school field. The coalition is an alliance of national, state, and local organizations in k–12 education, youth development, community planning and development, family support, health and human services, government, and philanthropy.
- *Financing Community Schools: A Framework for Growth and Sustainability* (Partnership for the Future of Learning): This finance brief discusses community schools funding in depth. It provides a framework for financing community schools and examples of how community schools at varying stages of development can identify and implement financing strategies.
- *Leading With Purpose and Passion: A Guide for Community School Directors* (National Center for Community Schools): This printed guide, developed by the National Center for Community Schools, provides practical advice and concrete resources for community school directors, with an emphasis on their leadership role in schools.

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Integrating Design Principles in Schools

Overview

Today we have a tremendous opportunity to reimagine our education system by using what we know from the science of learning and development. Infusing school environments and practice with this knowledge can ensure far better learning experiences and opportunity for students—experiences that are transformative, empowering, personalized, and culturally affirming. In addition, it can support practitioners in identifying and stopping practices that inhibit students' learning, especially students from marginalized groups who—because of their race, ethnicity, income, language background, dis/ability status, sexual orientation, or other social identity—have often been exposed to ineffective and discriminatory practices that inhibit their full development.

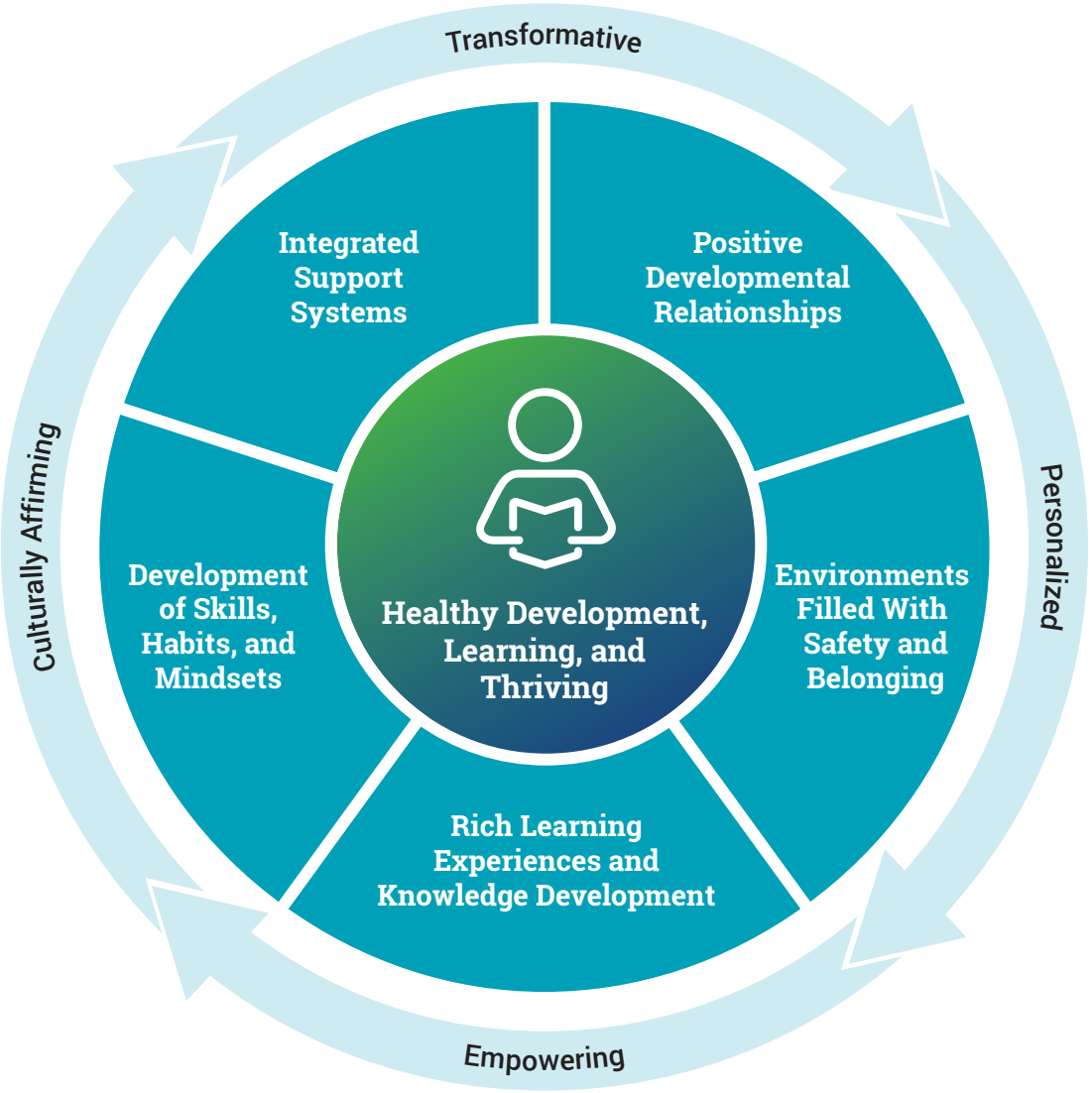
Developmental and learning science provides us with optimism about what all young people are capable of. The contexts and relationships they are exposed to influence what they learn and who they become.

Developmental and learning science provides us with optimism about what all young people are capable of. The contexts and relationships they are exposed to influence what they learn and who they become. Today, we can use the Guiding Principles for Equitable Whole Child Design and its associated design principles to build environments in all of our classrooms, schools, and community learning settings that enable children to develop and thrive. (See Figure 7.1.) By designing schools that integrate the five elements—Positive Developmental Relationships; Environments Filled With Safety and Belonging; Rich Learning Experiences and Knowledge Development; Development of Skills, Habits, and Mindsets; and Integrated Support Systems—we can help youth build resilience and knowledge; develop their full selves; and grow skills, habits, and mindsets they need to live lives of fulfillment. While the Guiding Principles for Equitable Whole Child Design are each critical to supporting youth learning and development, their impact is deeply felt and effective when practitioners integrate all five into a coherent, continuously reinforcing set of practices.

What the Science Says About Integrated Design

The human brain is a dynamic, integrated living system that operates in coordination with other systems. The tissue it is made up of is the most susceptible to change from experience than any other tissue in the human body. Complex skills, whether riding a bike, developing resilience, or learning to read, reflect the integrating properties of our continually developing brains and bodies. Emotional well-being and social competence provide a strong foundation for emerging cognitive abilities, and together they form the bricks and mortar of healthy brain architecture. The human brain grows by integrating all other systems—including those that govern feeling, thinking, acting, cognition, and processing—in ways that are highly sensitive to the physical and sociocultural context of a person's life.

Figure 7.1
Guiding Principles for Equitable Whole Child Design



The three core principles of human development are: (1) the astounding malleability of the human brain and body, (2) the fact that growth depends on experience, and (3) the importance of contexts in shaping development. Throughout life experiences, relationships and environments activate neural pathways, generating electrical activity that continuously strengthens the connections between brain structures and creates new ones. This is what is meant by the "wiring" of the brain, or the *integration* of the brain. Beginning early in life, more than 1 million connections form between brain structures per second.[1] And the way these connections form matters for what the brain can do. As Hebb's Law states, "Neurons that fire together, wire together."[2] It is these developing circuits that enable the emergence of increasingly complex thoughts, skills, knowledge, learning, and behavior; the expression of our identities, our interests, and our passions; and ultimately the expression of our potential. This is what is meant by the integration of the brain.

Once we understand that environments, experiences, and relationships drive the wiring of our brains, the task and responsibility before us becomes clear: to design settings and experiences for optimal development and learning. This is the purpose and the foundation for the Guiding Principles for Equitable Whole Child Design presented in this playbook. The development of a whole child emerges when we combine the five elements into experiences that connect to one another.

The driving force in development is the movement from simple to complex—through the agency of the child who plays an active role in developing skills. Skills and knowledge do not emerge fully formed but are built through practice—something we see every time we learn a new skill, such as reading, playing a musical instrument, and learning a sport. This process also means that the young person's agency in building new skills will be based on what they are encouraged to do and the resources and supports available to them. Like a web with many strands, there are different possible pathways in the development of complex skills, and these skills are interdependent, with more complex capabilities emerging as earlier ones are internalized and specific supports become available.

Supporting the learning of a complex skill means that even the most discrete skill, like solving an algebra word problem, needs to take into account the whole person learning that skill: their prior experience, culture, history, foundational skill development (in reading and math), identity (and identity threat), agency, and motivation. Young people are the sum of all these dimensions. If educators teach only to the discrete math skills, some children may learn the skills or content. But if they teach to the whole child, they can support all students in understanding the content and skills being taught, becoming curious to learn more, and being able to apply them to other problems.

What Does an Integrated Whole Child Approach Look Like in Schools?

Given what we know about the interconnectedness of the brain and development, it is important for practitioners to design learning settings that enable young people to develop their whole selves in the learning process. There is not just one way to integrate whole child practices and structures in a school or community learning setting. Rather, there are a number of ways that educators can nurture students' assets and address their needs and challenges to create equitable and impactful school settings. The case of the Springfield Renaissance School, a school that serves students in grades 6 through 12 in Springfield, MA, is one illustration of integrated practice, and the San Francisco Community School, serving students in grades kindergarten through 8, is another.

There is not just one way to integrate whole child practices and structures in a school or community learning setting. Rather, there are a number of ways that educators can nurture students' assets and address their needs and challenges to create equitable and impactful school settings.

Whole Child Design at the Springfield Renaissance School

The Springfield Renaissance School, an urban public secondary school in Springfield, MA, graduates 95% of its students and has supported every single graduate to be accepted into college since the school opened more than 15 years ago. Most of those students are first-generation college students.

When people hear about it, they often believe there must be a catch: Perhaps it is a small, selective school; maybe they weed out struggling kids; no doubt they have extra funding and staffing and a fancy facility. None of that is true. It is a regular, nonselective-admission district school with 700 students, most of whom are students of color from low-income families. The school receives typical district funding and has to share its crowded building. So what is going on here to produce these remarkable results?

It is not a gimmick: It is a culture. As a part of the EL Education national network, Renaissance cultivates a learning community that supports, respects, and empowers students in a holistic way. Because students are known and valued as individuals with positive personal and academic identities, they are more confident and resilient in taking on unusually complex and meaningful work.

The challenging work youth undertake at Renaissance connects learning to real-world issues and needs. Building upon a foundation that meets academic standards and fosters deep knowledge, educators at the school invigorate learning through instructional practices like interdisciplinary projects, service learning opportunities, and project-based learning expeditions, which often call upon students to conduct extended research in the field that will culminate in a product, presentation, or performance. Because EL Education focuses on a curriculum that combines in-depth inquiry with character development, these projects are also motivated by purpose, typically designed to contribute to the well-being of the community.

With these learning experiences at the core of the school, Renaissance classrooms are filled with discovery, inquiry, critical thinking, problem-solving, and collaboration. Teachers talk less. Students talk (and think) more. Lessons have explicit purpose, guided by learning targets for which students take ownership and responsibility. Student engagement strategies and activities differentiate instruction and maintain high expectations to bring out the best in all students, cultivating a culture of high achievement.

To empower and support learners through these rich learning experiences, Renaissance uses a constellation of structures to make that student success and a strong school culture possible.

The school staff work together as a team to push themselves to improve in the cultural responsiveness of their curriculum and teaching, in their active work for equity and anti-racism, in the sharpness and efficacy of their lessons, and in building classroom cultures that foster positive relationships and bring out the best in students.

Students meet in small “Crews” (advisories) every day. Crew supports the social and emotional health of students; fosters their academic resilience and growth; affirms their identities (e.g., race, culture, language, gender identity, sexual orientation, physical abilities); and compels them to work on their character: to be responsible, respectful, courageous, and compassionate. Students see their role at school as more than their own success—they are responsible for the success of their Crew and their classmates.

Academic work for students is framed with a noble purpose: to contribute to a better world. Students are gaining knowledge not for personal gain, but to help their families, their friends, their

communities, their country, and the world. They are just not preparing to be contributing citizens someday when they finish college: They are using their skills right now in service of community improvement, with guidance from a range of community organizations and experts.

Students lead their own learning in many ways. They present portfolios of their work multiple times per year in student-led family conferences and at transition points in their academic career to a panel of community members, having revised their work and practiced their presentations to meet a high standard. They hold exhibitions of the work as community events and collaborate with the broader community for positive social change.

The school hosts educators from all over the nation and the world, and often those visitors are looking for the special "thing" that the school is doing differently—the magic strategy. But there is no one factor. Renaissance is focused on whole child design with all its elements. Students are pushed academically with more challenging work than is the norm, and one could assume that the answer is simple: Just provide higher-level academics. However, scientific research makes clear that unless students feel they are capable of accomplishing the work and have supports to do so, feel physically and emotionally safe, feel they belong and are valued, and have positive relationships with peers and adults, they will not feel capable and motivated to show academic courage and apply themselves deeply. If the curriculum and lessons are not engaging and culturally responsive—and if they do not explicitly focus on building skills, habits, and mindsets, rather than just transmitting content—students will not become self-directed and resilient learners. The environment cultivates students who become ready to take on challenging academic work.

It is helpful to understand how the experience of high school students at Renaissance differs from that of students in a more typical school. In a more traditional high school, students often limit their social interactions to a group of similar peers. Many students are anonymous, some are marginalized and slip through the cracks, and the emotional well-being and character development of students are not considered part of school. In a traditional model, students typically move among classes where each of their teachers uses entirely different practices; where teachers know nothing of students' academic or personal lives outside that classroom; and where students often sit quietly, passively, hoping not to be noticed or called upon.

In contrast, Renaissance 9th-graders meet every day in a small advisory with a Crew Leader and a team of diverse Crewmates who will stay with them as a family for 4 years. They discuss their families, their lives, their physical and emotional health; they discuss challenging issues in their local community and the world; and they share their academic progress and challenges. They feel responsible for each other's lives—they support and push each other to be their best selves. Their teachers meet regularly to align their work so that interdisciplinary academic projects are supported with skills and content in mathematics, science, history, English, and art. Teachers across all disciplines use common norms, protocols, and instructional practices that build a growth mindset, agency, and work habits; every class uses the same structures to build academic courage, focus, and collaboration.

The traditional walls between school, family, and community are more porous at Renaissance. Access to community services for physical, mental, and financial health, and learning enrichment, are discussed regularly in school and are combined with what the school can provide. Families are in the school often, and not just for sports and performing arts. Students present their learning to their families and communities through individual and class presentations multiple times per year, and students reflect with their families on their personal growth and their emotional, social, and

academic challenges. Parents and community members and organizations assist with the academic projects of students as experts and leaders.

How does learning look when all of that comes together? When the Springfield Renaissance School first opened, students took on a project to help the city. Ninth-graders were trained by city engineers to perform energy audits for buildings (e.g., analyzing HVAC systems, insulation, appliances, lights, and windows), and after their fieldwork, students created a professional report, Greenprint, for the city, calling for the renovation of city schools. They recommended that Springfield invest $156,000 in energy improvements specified in the report and guaranteed that the city would reclaim all its funds within 5 years as cost savings—while also helping the environment. The city took their advice, and within 2 years it had recouped all its investment and was saving taxpayer dollars. City leaders then set aside a quarter of a million dollars to continue this work—with student experts leading the way.

Source: Adapted from a vignette provided by Ron Berger, Senior Advisor on Teaching and Learning at EL Education.

Practitioners at San Francisco (S.F.) Community School have also designed their school in line with the science of learning and development, implementing a unique set of whole child structures and practices that meet the needs of their learners and communities. S.F. Community School is a public k–8 school in San Francisco, CA, that seeks to include English learners and students with disabilities, and the majority of students served by the school are eligible for free or reduced-price lunch. Educators at the site engage youth in hands-on, student-centered learning experiences with ample scaffolds. This learning, which builds students' knowledge and develops valued skills, habits, and mindsets, is bolstered by structures that allow relationships to flourish, collaboration to ensue, and supports to be identified.

Integrating the Essential Elements of Whole Child Design at S.F. Community School

On a Thursday evening, parents, students, and community members pack into a 2nd- and 3rd-grade classroom at S.F. Community School's Project Open House. Guests sign in as they enter the room and pick up a list of questions and a rubric about a project recently completed by the students. A roller coaster track designed to accommodate marbles extends from the ceiling, runs across the tops of tables, and spirals downward to the ground. Students stand in line next to the section of track they constructed, each grasping their prepared presentations and trying not to fidget. They make last-minute adjustments to the twists and turns of the track to ensure the structure functions as intended. As the presentation begins, the audience watches as each student describes their portion of the track and explains the scientific concepts, like friction and velocity, that govern how the marble zooms down the track. The teacher climbs up a ladder and releases a marble. As the marble sails through the track, the audience gasps appreciatively. The presentation ends with audience members asking the students questions about their work, and the students readily answering.

The students worked on this roller coaster project for 8 weeks, learning concepts such as acceleration and deceleration, writing summary paragraphs about the process of building their roller coaster, and reading both scientific and fictional accounts of roller coasters. Throughout the project, students worked in groups to build multiple versions of their roller coaster and experiment with the best models. After this, they combined their efforts to construct one large track. The project required them to apply language skills through written and oral explanations of their work, practice interpersonal skills to resolve disagreements, and engage in trial-and-error experimentation to get their model right.

During the project, the teacher presented 10- to 15-minute mini-lessons on key concepts related to physics, group work, and writing. The rest of the time, the teacher let the students take the lead in applying what they learned, getting involved only as needed to set expectations for the work.

Having looped with the 3rd-grade students (i.e., most of them had been in this teacher's class as 2nd-graders as well), the teacher knew the students well and used these relationships to tailor their learning. For example, the teacher strategically grouped students with different skill levels, providing English learners and students with disabilities with additional attention as needed. The teacher met weekly to plan this project with two other 2nd- and 3rd-grade teachers. Throughout the project, the teacher checked for understanding by using simple formative assessment strategies, such as taking notes on the vocabulary used by the students when discussing the project in their groups. The final product presented at the Project Open House—the roller coaster—was the summative assessment.

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Practices like those described above characterize teaching and learning at S.F. Community School and point to the ways that the school creates a safe and inclusive environment for intellectually challenging learning.

Across classrooms, educators engage students in project-based learning, creating interdisciplinary units that help students study topics in engaging, authentic, and immersive ways. With their project-based approach, educators take active steps to help students progress from simple to more complex tasks. They provide personalized support, implement well-managed groups to further learning, and use a range of assessments that help students identify where they need to grow their knowledge and skills. All of this builds deep knowledge while developing young people's valued skills, habits, and mindsets that reinforce learning.

Educators at S.F. Community School implement their units and lessons based on a deep understanding of their students. Looping with students for 2 years is common practice and helps build stronger relationships and knowledge of a student's abilities and needs. S.F. Community School also stresses the importance of teachers working closely with families. The school uses a number of strategies to involve families in their children's academic progress, such as biannual parent, teacher, and student conferences as well as open houses, as in the vignette above, where students are able to demonstrate their learning for parents and other attendees. All these actions work to create an inclusive school environment that prioritizes relationship-building and connection among students, educators, and families.

Teacher leadership and collaboration structures—such as committee and team meetings—also support student learning and well-being. For example, some teachers participate on the professional development team that plans staff retreats and meetings, which help educators improve their abilities to provide universal and personalized support within the school's rich instructional model. Educators also participate in weekly team planning sessions that help them engage in consistent discussions of practice with their colleagues and identify necessary supports or interventions for students who need additional help. Taken together, these collaborative structures create opportunities for educators to enhance their teaching and create positive collegial relationships while demonstrating how teachers' knowledge and expertise are valued.

Source: Adapted from Wentworth, L., Kessler, J., & Darling-Hammond, L. (2013). *Elementary schools for equity: Policies and practices that help close the opportunity gap*. Stanford Center for Opportunity Policy in Education (SCOPE).

Barriers and Solutions to Taking Whole Child Design to Scale

Science and research provide us with guidance on how to create more powerful school communities that provide better learning experiences and opportunities for all students, which are transformative, empowering, and culturally affirming. Despite this growing knowledge around how to create powerful learning environments, it remains challenging for districts and schools to create and sustain learning settings that integrate elements of equitable whole child design.

Progress has been impeded by both historical traditions and current policy built on dated assumptions about school design, accountability, assessment, and the nature of teaching and learning. While most industries look very different from how they looked a century ago—think medicine, aviation, and publishing, for example—our education system remains seemingly stuck in another time, reflecting the designs created in the early 20th century to accommodate mass education using assembly-line technologies. Our youth are entering a totally new world—one in which knowledge is rapidly expanding; technology will take over most low-skilled work; and most jobs will require high levels of knowledge, skill, and capacity to constantly learn and apply new ideas to uncharted problems. Yet our education system is still structured to prepare a small minority of students for college and creative careers, and the rest—particularly students of color and students from low-income families—for factory jobs that no longer exist.

The COVID-19 pandemic has created a disruption of the status quo and presents an opportunity to seize this moment for change. District and school leaders can harness this unprecedented time—as school is necessarily being reconceptualized to educate stakeholders on the science summarized here—and begin phasing in structures and practices to create supportive and powerful learning environments, both virtual and in person.

What can we do to create more schools that teach all students the complex skills they actually need for academic and life success while affirming their identities and potential, developing their character, and fostering equity? Evidence suggests that we must:

- redesign schools to support high-quality teaching and strong relationships;
- rethink curriculum, assessment, and accountability structures so that they focus on powerful learning with associated supports;
- improve professional learning opportunities;
- build unified integrated support systems; and
- take a systemic approach that enables change in all schools.

Redesign schools for quality teaching and strong relationships

The organization of schools has been based on a factory model that assumed students' learning could be assembled through standardized transmission of information at different stops along the assembly line (grade levels and separate class periods)—and that, by creating different tracks along the assembly line for students with different "potential," students could be efficiently prepared for their very different roles in life.[3] Not only was the model rooted in the eugenics of the time, which proffered that race- and ethnicity-based differences in intelligence should guide tracking decisions, but it also minimized the importance of relationships among people and connections among ideas.

The harms caused by outdated structures that sort and segregate learners and, at the secondary level, leave them without access to caring adults who know them well, are exacerbated by policies that implicitly encourage teacher-centered, transmission pedagogy; curricula that neglect the cultures of most groups; and punitive school discipline practices that exclude students from school rather than drawing them into the school community. The designs that have made it difficult for schools to consistently create space for positive connection and relationship-building with students and families have also made it difficult to create connections between and among practitioners to support their collaboration. Because these designs are the way many school leaders, educators, and parents have experienced school themselves, it is easy to assume that this is the way schools need to be.

To remove these obstacles, states and districts can encourage school redesign by rethinking staffing patterns and master schedules to create consistent time for teacher collaboration and to put in place structures that support the development of long-term, positive relationships between educators, students, and families (e.g., looping, advisories, block scheduling). This can also involve rethinking facilities policies to enable smaller schools or small learning communities within larger buildings. Additionally, state and local policies can provide flexibility and incentives for leaders, with their teacher labor union partners, to adopt new approaches to staffing that favor personalization across grade levels, departments, and other traditional organizing features that have sometimes fragmented schools.

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The elimination of academic tracking may require additional professional development coupled with curriculum strategies that support heterogeneous learning and purposeful use of expanded learning time and support—during the school day, after school, and during summer and intersessions—to accelerate learning for students who have specific needs. In addition, universal preschool will reduce the gaps that exist before students begin kindergarten.

Rethink curriculum, assessment, and accountability structures

Assessment and accountability systems have also posed barriers to the implementation of equitable whole child designs. To enable school transformation at scale, assessment systems need to incentivize and support structures and practices that further meaningful learning and development and the process of continuous improvement.

In order for current statewide assessment systems to support deeper learning that can inform and improve instruction in schools, the instruments they use would have to move beyond largely multiple-choice items measuring lower-level skills to more open-ended performance tasks that are integrated into a coherent system of curriculum and instruction for students, as well as professional learning for teachers, intentionally supporting a rich vision for student learning. This system would also offer formative information on rich tasks throughout the school year and would be structured

to inform the teaching and learning process, not to deny access to educational opportunities or to administer sanctions to students, teachers, or schools.

Such assessments should be part of accountability systems that explicitly evaluate and support student access and success. Current accountability frameworks do not typically include factors beyond test scores that influence or reflect student success, such as indicators of opportunities to learn (financial, curriculum, and teaching resources), the quality of teaching and learning experiences, and preparation for postsecondary success. Indicators like student suspension rates and survey data from students, educators, and families about school climate can focus the attention of systems on how to create positive, inclusive contexts that offer restorative practices and social and emotional learning and supports.

Improved accountability systems would provide information that leads to a more informed focus on school improvement for whole child education; more equitable access to learning opportunities; and greater student success, broadly conceived. This could include a wide range of academic learning indicators, such as access to and completion of a high-quality career-technical and/or college preparatory curriculum, among others. For example, California includes a Seal of Biliteracy and a Seal of Civic Engagement among the indicators of accomplishment.

Having more balanced accountability systems that incorporate multiple measures can help practitioners and leaders see what is working and what needs to be fixed in educating young people to become productive, engaged citizens who have the knowledge, skills, and dispositions to participate fully in society.[4] With more comprehensive measures in place, accountability systems could animate the process of continuous improvement and provide important guidance to practitioners around the areas of strength and struggle in their practice.

In addition to creating a more holistic school quality review process, states and districts can also adopt standards that communicate the importance of whole child teaching and learning practices and incentivize the improvement of capacity-building structures that would enable their integration into learning settings. Districts can work with their communities to create graduate profiles that specify the valued skills, habits, and mindsets that students should have when they graduate. This clear visualization can support strategic planning and innovative efforts toward these outcomes. States and districts can adopt standards for academic, social, and emotional learning that can guide practitioners in developing school policies framing everything from curricula and programs to student discipline and family engagement.

Improve professional learning

Putting into place the structures and practices that support equitable whole child design requires robust and embedded systems of professional learning for both teachers and school and district leaders. Historically, most preparation programs and ongoing professional development opportunities have neither effectively built practitioners' knowledge of the elements of equitable whole child design nor built their capacity to integrate them into school practice. Fortunately, we have learned a great deal about how preservice and in-service professional learning opportunities can be restructured to build practitioner knowledge, skill, and investment in these schooling approaches.[5]

The work of the EdPrepLab shows how preservice preparation programs for both teachers and administrators can be aligned around a coherent vision of teaching and learning that builds on the knowledge base regarding child and adolescent development in all of the domains (cognitive, social, emotional, moral, ethical, physical, and academic, as well as identity development) and learning sciences as they inform curriculum and instruction in and across the content areas. Educators can learn how these ideas comprise the Guiding Principles for Equitable Whole Child Design and how their implementation and integration advances learning, development, and well-being.

Pre- and in-service learning programs are most effective when they understand that what educators and leaders need in order to learn to do their jobs well is tightly aligned to the capacities they are being asked to develop in their students: opportunities to learn experientially, to see and experience equitable and supportive pedagogies in action, and to solve problems of practice collaboratively with others as they apply knowledge to novel situations. Thus, learning *about* pedagogy derived from the science of learning and development also means learning *with* and *through* such pedagogy. Practitioners can acquire a deep, flexible, firsthand understanding of learning and development through extended and well-supported residency placements as well as through the use of student-centered pedagogies that provide opportunities for reflection and feedback in the courses they take. In so doing, programs can take a developmental approach to preparing leaders and educators, consciously supporting them through the stages that help them become increasingly expert.

District and school leaders can help build their own capacity and that of school staff by prioritizing resources, time, and space for professional development focused on how to implement all elements of whole child design. This includes opportunities for educators to learn about the science of learning and development as well as opportunities to help practitioners build positive relationships with students; implement student-centered learning opportunities; and cultivate students' skills, habits, and mindsets to support their academic growth and well-being. In-service learning for leaders must continue to support their work as instructional leaders who are knowledgeable about whole child educational practices as well as support them in thinking structurally to create and sustain schools that integrate the essential elements of whole child design.

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Professional development also needs to support practitioners in developing the kinds of caring, inclusive, and empowering communities that children need to support their development and learning. This includes nurturing assets-based mindsets among educators and leaders. The messages students ultimately receive in learning environments depend greatly upon the attitudes, beliefs, skills, and capacity of staff. Beliefs that certain practices are more successful than they in fact are, and implicit biases that impact expectations and perceptions of students' behavior and performance, can undermine the success of efforts to create a positive learning environment. In turn, professional development for leaders and educators must address stereotype threat and implicit bias and center proactive approaches to anti-racist practice, cultural pluralism, and culturally responsive pedagogies.

Districts and schools that have successfully built capacity in adults for these practices take the long view and a sustained year-over-year approach, consistent with features of effective professional development for teachers and for leaders, which include providing opportunities for collaboration, modeling, coaching and expert support, and feedback and reflection (see "Where to Go for More Resources" sections throughout the playbook for low- or no-cost professional learning resources).

Build unified integrated support systems

Practitioners committed to whole child school redesign may encounter barriers to creating and sustaining integrated support systems. Bringing different systems together to support children's health, welfare, and education across bureaucratic boundaries can be challenging at every level. Some states, counties, and cities have created a Children's Cabinet or other cross-agency council to coordinate and begin to streamline programs across agencies so that they can work together in local communities. Many have begun to fund community schools that are designed and staffed in ways that enable them to integrate services for children more effectively.

Whatever the approach, it is important that the construction of integrated support systems be purposeful and involve training for all stakeholders. Too often, ad hoc mechanisms are set in motion with personnel who have too little training related to systemic change or too little support for formative evaluation. It is common to find individuals and teams operating without clear understanding of functions and major tasks. In addition, other site stakeholders are often underinformed about support systems and the opportunities they provide to enhance learning and well-being. Fortunately, we have research that provides many lessons about how access to integrated systems of support can become a reality. One key lesson relates to ensuring a strong infrastructure for change, including high-level administrative support and well-trained change agents.[6]

This includes establishing a support systems team, designating clear roles and responsibilities for personnel, and institutionalizing procedures so that integrated support systems can be maintained in the face of personnel or leadership transitions. Creating—and sustaining—readiness to implement integrated support systems also requires capacity-building, which can include a specific focus on developing a unified system of support. Professional development must provide on-the-job opportunities and additional time to enhance the capability of those directly involved and support them in their particular roles and responsibilities. Professional development of teachers, administrators, other staff and volunteers, and community partners must also include a shared developmental perspective so that there are common understandings about how best to enhance student learning across the spectrum and how to address barriers to progress.[7]

Sustained system changes involve working with a critical mass of stakeholders—community members, educators, and policymakers—to deepen their understanding of and commitment to integrated support systems. Of particular importance is ensuring that all stakeholders understand the essential elements that must be implemented and sustained if there is to be substantive, rather than cosmetic, change. This collaboration involves the ongoing development of productive working relationships with external and school-based partners as well as others who may be more resistant or skeptical of the importance of integrated support systems and their impact on learning. Cultivating a steering group of influential advocates and champions for change may be valuable in removing barriers to the work and in creating sustainability.[8]

Take a systemic approach that enables change in all schools

With the historic and current barriers to sustaining whole child school design, many believe this work is only possible in niche or independent school settings. Yet research and practice tell us that this work is possible in all settings, particularly when states and districts transform policies to create productive incentives and reduce barriers for the system as a whole. Examples of such approaches are being developed and supported through the Whole Child Policy Table, which brings together a wide range of policymakers and community-focused organizations to design and share policy strategies that:

- create a vision for whole child policy and practice;
- transform learning settings to support students;
- enable productive instruction;
- ensure adult learning; and
- organize and leverage resources.

Among those strategies, for example, is a whole child approach to school improvement that can be supported with funding from the Every Student Succeeds Act. A range of resources for supporting high-leverage policy transformations can be found here.

> Learning to design and manage schools in new ways requires opportunities to imagine, build, and support new approaches.

Learning to design and manage schools in new ways requires opportunities to imagine, build, and support new approaches. To accomplish this, districts and schools can partner with each other for learning and with practitioner-led organizations and networks who can support them in developing new structures and practices that enable stronger relationships, student-centered learning, and equity. (See "Where to Go for More Resources," below, for some of these.)

Recent studies document how networks can partner with districts to redesign schools for student-centered learning models and help them rethink the structures that govern how educators are organized to work with students and with each other to support learning.[9] This includes creating schools that allow for advisory systems, teacher teaming, and teacher looping, along with schedules that provide ample time for teachers and students to engage in collaborative and applied learning. In addition, these networks help facilitate important professional learning that is fundamental to equipping leaders and educators with the skills and mindsets necessary to teach for deeper understanding; engage in motivating performance assessments; and support equitable learning through academic scaffolds, restorative practices, and integrated support systems. While there is still significant work to be done to extend whole child school design to all schools, districts, and states, turning to schools and networks that have sustained these changes in the face of obstacles can provide insights into how these barriers are faced and overcome.

Conclusion

Education has long been central to the promise of the United States and its democracy. However, our current education system has not been designed to promote the equitable opportunities or outcomes that today's children and families deserve and that our democracy and society need. Our system was designed for a different world—to support mass education preparing students for their presumed places in life. That world believed that talent and skills were scarce; it trusted averages as a measure of individuals; and it was a world in which racist beliefs and stereotypes shaped the system so that only some children were deemed worthy of opportunity.

To achieve the transformation we need today, education systems must be willing to embrace what we know about how children learn and develop. The core message from science is clear: The range of students' academic skills and knowledge—and, ultimately, students' potential as human beings—can be significantly influenced through exposure to learning environments that use whole child design. To create this transformation, the science, structures, and practices highlighted in this playbook can become the foundation for a new approach to learning when integrated and implemented—one that supports equity for all students and the development of the full set of skills, competencies, and mindsets that young people need to live and thrive in their diverse communities.

Where to Go for More Resources

- Big Picture Learning: Big Picture Learning works with districts and school leaders to design schools that immerse students in interest-based learning experiences that are grounded in personalized courses of study and workplace learning that typically takes place in internships. To date, Big Picture Learning has worked to create and sustain over 62 schools in the United States and supports more than 100 schools internationally with the goal of advancing equity and deeper learning in personalized and meaningful ways.

- City Connects: City Connects partners with schools to transform existing student supports in a school and in the surrounding community into an integrated support system of care that addresses the strengths and needs of each student across all developmental domains. To date, City Connects has implemented its approach in 82 schools across 6 states, helping them to create and execute a tailored plan of resources, opportunities, and relationships, with the goal of supporting each student to be ready to learn and engage in school.

- Coalition for Community Schools: The Coalition for Community Schools is an alliance of national, state, and local organizations in k–12 education, youth development, community planning and development, family support, health and human services, government, and philanthropy. It offers a range of tools and resources that can help educational leaders to build and sustain community school models and initiatives in their area, including opportunities to connect with technical assistance providers that can help communities improve their planning and management.

- CORE Districts: The CORE Districts are a collective of districts across California that collaborate to build educator capacity and effective data processes that support whole child education. Since 2013, they have established a shared data system that incorporates academic and nonacademic indicators and have facilitated interdistrict professional learning that supports schools and systems in their areas of strength and struggle. Through

their collective work, the CORE Districts have shared the key lessons and takeaways that have emerged in their efforts to support continuous improvement within and across districts and schools, and with state and federal policymakers.

- EdPrepLab: EdPrepLab supports a network of preparation programs that aim to develop strong, equity-oriented educators who maintain a robust knowledge of the science of learning and development and its implications for practice. It helps programs develop coherent and well-integrated coursework and field experiences that can prepare their emerging educators to implement and integrate the essential elements of whole child school design.

- EL Education: EL Education supports academic, social, and emotional learning and character development across more than 150 schools that serve over 500,000 students. To do so, EL Education offers a range of resources and opportunities that help practitioners build and sustain whole child school design. These include district partnerships in which EL Education works with partners to implement their k–8 curriculum with strategic planning and professional learning support. The network also offers online courses for educators and other forums for educator and leadership development that can enable and sustain school redesign.

- Envision Learning Partners: Envision Learning Partners (ELP) helps educators, school leaders, and district officials build high-quality systems of performance assessment to engage students in rich and meaningful learning. ELP facilitates discussions among diverse teams to identify equity challenges and define the skills students need to succeed. ELP then works with practitioners to co-design high-quality performance assessments and build professional capacity to sustain that learning system. To date, the organization has supported work in over 100 districts and 45 schools to transform learning experiences for over 200,00 students.

- The Internationals Network: Internationals Network designs, develops, and supports schools and programs for recently arrived immigrants and refugees. To date, it has partnered with 12 districts to develop 28 schools that meet the needs of multilingual learners through an activity-based pedagogical model that features collaborative, inquiry-based learning. In addition to supporting school development, Internationals Network provides professional development, offering practitioners experiential learning opportunities that simulate the effective practices Internationals schools use to support multilingual learners.

- Institute for Student Achievement: The Institute for Student Achievement (ISA) assists with whole-school reform efforts around the country using seven evidence-based principles, which focus on college preparatory teaching and learning, relationships and personalization, and continuous improvement. Through this lens, ISA supports school districts in creating and sustaining equitable practices through activities like equity audits, strategic planning support, and professional development.

- Linked Learning Alliance: The Linked Learning Alliance is a coalition of educators, educational leaders, and community organizations that promotes the integration of college and career preparation for young people in educational systems. Specifically, it promotes

the implementation of approaches that emphasize strong academics alongside access to comprehensive student supports and real-world learning opportunities that enhance students' skills and job-related knowledge. To advance this work, the Alliance works to grow the field's understanding of the power of linked learning experiences, elevates policies that can enable this pedagogical approach, and facilitates professional development that grows practitioner and community knowledge.

- New Tech Network: New Tech Network partners with school districts to support comprehensive school change centered on the implementation of interdisciplinary, project-based learning. To do this, the network engages district officials and practitioners in professional development that helps them build schools that implement project-based learning and consider how to spread this deeper learning model to other schools through a supportive policy and personnel infrastructure. To date, New Tech has worked closely with over 200 districts and schools nationwide and boasts high college persistence rates through its project-based learning approach.

- Summit Learning: Summit Learning employs a research-based approach to education designed to drive student engagement, meaningful learning, and strong relationships that prepare students for life beyond the classroom. The Summit Learning program offers schools customizable curriculum, a range of educational resources and technology tools, professional development for educators, and ongoing coaching and support for schools. To date, the program has reached over 80,000 students, 4,000 educators, and nearly 400 schools across the United States.

- Transcend: Transcend works with schools and districts to provide design and implementation support as they advance fundamental change to their school models. For practitioners beginning to design or redesign schools, Transcend provides coaching, research-driven tools, and other professional supports that guide practitioners through a research and development process grounded in equity and science. For those already engaged in school design, the organization helps leaders and educators understand and strengthen the conditions for innovation and effective implementation.

- Turnaround for Children: Turnaround for Children works to support practitioners in advancing and implementing whole child educational practices. To this end, the organization produces research-based tools for educators, such as a toolkit on how to use a whole child vision to assess and plan for tiered systems of support and resources to accelerate healthy student development and achievement. In addition, Turnaround for Children works with schools, districts, and networks across the country, which, to date, includes training, coaching, and support to over 220 school leaders in 76 schools to help create healthy learning environments that catalyze success and well-being.

References

For more information on the research supporting the science and pedagogical practices discussed in this section, please see these foundational articles and reports:

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Appendix A: Developing the Design Principles

The goal of the Design Principles project was to translate key findings from the science of learning and development into concrete practices and structures that can guide equity-driven transformation of schools, districts, and youth-serving organizations. The Learning Policy Institute, Turnaround for Children, and the Forum for Youth Investment formed the core project team, which sought to accomplish the following objectives:

- Co-create a set of tools for stakeholders in schools, district offices, and education support organizations that describe and provide examples of what schools and classrooms look like when they are aligned with science of learning and development (SoLD) principles.
- Generate products and materials that are focused on equity, relevant for key audiences, accessible and practical for use, and extensible to other tools, and that highlight the interconnectedness of SoLD principles.

Committees

While led by the Learning Policy Institute, Turnaround for Children, and the Forum for Youth Investment, the core project recognized the importance of leveraging the deep knowledge and expertise of the educational ecosystem, including educators, counselors, curriculum and tool developers, and community-based organizations, in the development of the design principles from the project's onset. To enable this form of co-creation, the core project team created three intersecting committees to advise the project (see Acknowledgments for full list of committee members):

- The Senior Science Advisory Committee: learning scientists and human development experts who were tasked with ensuring that the design principles accurately captured the science of learning and development and supported comprehensive child development and whole child education.
- The Advisory Committee: association and system leaders, policymakers, and subject matter experts who were instrumental in advising the project on the nature and presentation of the design principles, how to address barriers, and how to leverage policy and practice opportunities to amplify the work.
- The Design Team: experienced school designers, school leaders, and experts in the fields of learning, health, and wellness, who were instrumental in co-creating design principles materials and identifying resources and illustrations of practice that captured robust, equity-oriented examples of the science of learning and development in action.

Initial Design and Prototype Development

Once committees were established, the core project team began creating the vision and overall structure that could guide the development of design principles. As a starting point, the core project team identified the Guiding Principles for Equitable Whole Child Design as a framework, which was a tool and graphical representation emerging from early conversations among SoLD partners. With an initial framework in hand, the core project team moved quickly to elicit the knowledge and

expertise of their committees in the development of the design principles and their scientific and field grounding.

To do so, the core project team organized and facilitated virtual convenings to engage committee members at different stages of the work and collected feedback to guide ongoing iterations. Initial convenings in February 2020 focused on introducing members to the project and their roles and collecting preliminary feedback on key challenges and concepts that should be considered and reflected in the final products. From these initial meetings, the core project team synthesized feedback and outlined next steps to begin building out the design principles materials; namely, a set of goals for youth learning and development that served as building blocks for the project.

In the spring and summer of 2020, the core project team organized additional convenings with committees to receive feedback on the emerging project materials. At this juncture, the committees provided input on additional concepts that should be presented in the framework, identified structures and practices that should be reframed or elevated, and pointed the project team to exemplars and case studies that could illustrate our ideas in action for our target audiences.

With this feedback in hand, the core project team began collaborating with Design Team members and select members of the Advisory Committee to develop the content that would be incorporated into the playbook and its accompanying web interface. Specifically, the core project team developed and refined content by soliciting feedback and support from committee members based on their area of expertise and capacity. In turn, the external partners reviewed materials to make sure content was accessible and clear and suggested additional practices, resources, and examples that should be featured in our final products.

The final phase of the project focused on dissemination strategies and frontier issues that the project team should consider as it moved to launch design principles materials. To this end, the Senior Science Advisory Committee provided input on important concepts and strategies to support the development of critical skills, habits, and mindsets, and the advancement of trauma-informed practices, particularly in light of the challenges exacerbated by the pandemic and ongoing public displays of racial violence. In addition, the Advisory Committee suggested approaches that could help practitioners implement the design principles, generated strategies the core project team could consider to combat misapplications, and identified other aligned initiatives that could help amplify or reinforce this work. Advisory Committee members also provided input on the content and format of the materials, noting how the project team could make the materials accessible and useful to school and district leaders.

Appendix B: Goals for Youth Learning and Development

Our goals for youth learning and development are grounded in the science of learning and development (SoLD) and serve as the building blocks for the design principles for schools. They capture the orientations, skills, habits, and mindsets that we hope all young people will develop and maintain as a result of their experiences in k–12 schools and other youth-serving settings.

These goals acknowledge the complexity of development and span multiple domains of learning, including social and emotional development, identity development, physical well-being, mental wellness, cognitive development, ethical and moral development, and academic development. The skills are reinforcing and build upon one another in ways that allow for greater synergy among developmental goals and contribute to the development of complex, higher-order skills. While we categorize the goals under the area of development with which they most align, we acknowledge that the goals are cross-cutting and integrative.

Research also suggests that some skills are foundational, and children's skills develop in unique and integrated ways based on their web of experiences. A child's progress in developing one skill set can accelerate or impede progress in another area. Our goals hope to capture elements of that progression toward the final end point but recognize that children follow different pathways.

We also acknowledge that these goals are not developed in silos. They require deliberate action on the part of adults, communities, and policymakers to support youth on their learning and developmental journeys by ensuring that they have access to services and environments with the necessary preconditions that enable healthy development. This must include intentional actions to address the oppression of historically marginalized communities and systemic racism that exacerbate inequalities in education. Such support also requires a unified, comprehensive, and equitable system for addressing barriers to learning and teaching and re-engaging disconnected students.

How We Generated Our Goals

In generating our goals, we identified aims that align with the framework developed by the Chan Zuckerberg Initiative for whole child development and its six domains (i.e., academic development, cognitive development, identity development, social and emotional development, mental health, and physical health). In addition, we included an ethical and moral development domain to emphasize that individual goals are connected to larger community aims and elevate the civic mission of education. Goals are currently categorized under the development dimension with which they most align, but they are interrelated and mutually reinforcing.

The goals themselves were also inspired by and adapted from materials generated by several organizations and experts who have been working to promote school transformation principles and practices supported by the science of learning and development. These include:

- CASEL's Social and Emotional Competencies
- EL Education's Dimensions of Student Achievement
- Hewlett's Deeper Learning Competencies
- Interaction Institute for Social Change

- Turnaround for Children's Building Blocks for Learning
- UChicago Consortium on School Research Foundations for Young Adult Success Framework
- Institute for Applied Research in Youth Development

The Goals

Cognitive development

Learners can think critically and creatively to solve complex problems. They can:

- pose questions and seek out relevant resources and tools to answer them;
- generate new ideas and fresh perspectives;
- adapt to emerging demands and tasks;
- evaluate information, evidence, and ideas from multiple sources and perspectives, recognizing personal biases and those of others;
- analyze and synthesize diverse bodies of knowledge and apply their knowledge to answer questions and create solutions;
- use metacognitive skills to reflect on and manage their own learning process; and
- set and work toward meaningful personal and collective goals with a strong sense of agency and purpose.

Academic development

Learners deeply understand content and can apply their knowledge beyond the classroom. They can:

- understand central concepts and ways of knowing in a discipline and engage in essential modes of inquiry within and across disciplines;
- explain and demonstrate how major ideas and concepts relate to each other and to the work they are doing;
- transfer and use knowledge to solve problems in novel contexts or situations; and
- positively contribute to and support the learning of peers.

Social and emotional development

Learners are self-aware and engage meaningfully with others. They can:

- recognize their own emotions, thoughts, and values and how these influence behavior;
- successfully regulate their emotions, thoughts, and behaviors in different situations—effectively managing stress, controlling impulses, resisting inappropriate social pressure, and motivating themselves;
- assess their strengths and areas for development, with a well-grounded sense of confidence, optimism, and a growth mindset;
- persevere, problem-solve, seek assistance, and exhibit resilience in the face of ambiguity and challenge;

- establish and maintain healthy and rewarding relationships with diverse individuals and groups, empathetically supporting their learning and development;
- take the perspective of and empathize with others, including those from diverse backgrounds and cultures; and
- communicate clearly, listen well, cooperate with others, negotiate conflict constructively, and offer help when needed.

Identity development

Learners hold a positive sense of identity, self-potential, purpose, and direction. They have:

- a positive sense of their racial, ethnic, cultural, gender, sexual, and spiritual identities and appreciate other aspects of their identities that contribute to their personhood;
- a sense of agency and the ability to make choices grounded in their values and take an active role in their life paths, rather than solely being the product of their circumstances;
- the ability to make constructive choices about personal behavior and social interactions to support the well-being of self and others;
- the ability to reflect on what they care about, what they hope to accomplish in life, and how their actions relate to their goals;
- the ability to identify and develop areas of interest that support a strong sense of purpose and fulfillment; and
- the ability to see themselves as a vital part of their communities and as having value and making a unique and fruitful contribution to their communities.

Physical and mental well-being

Learners make healthy life choices. They:

- have access to healthy food, clean water, and other positive environmental conditions that enable them to live healthy lives;
- have access to mental wellness services, tools, and resources to develop healthy coping strategies that support them in healing and building resilience from stressful events;
- engage in healthy eating, nutrition, and activity to promote learning and physical well-being and are supported by the adults in their schools and community to do so;
- establish lifelong patterns of healthy behavior;
- have a positive relationship with and awareness of their bodies;
- develop positive mindsets and have tools to cope with and move beyond negative or destructive emotions, including depression and anxiety;
- hold a mindful commitment to making choices that optimize their physical and mental health and serve their bodies, minds, and spirits well; and
- understand the role health plays in positive learning and development and advocate for themselves and others to improve conditions that support healthy choices for all individuals, including those who are enabled and those who have physical impairments.

Ethical and moral development

Learners are empathetic, ethical, and proactive in contributing to the welfare of their communities. They:

- treat others with respect and consideration;
- understand how their individual actions contribute to their community in and out of the classroom;
- contribute to efforts to create and uphold a just and inclusive learning environment;
- value and respect the perspectives and experiences of peers and adults from different racial, ethnic, linguistic, and economic backgrounds as well as those with different sexual orientations, those who learn differently, or those who have disabilities;
- collaborate and communicate effectively across lines of difference; and
- use their knowledge to advocate for themselves and others to advance civic ideals.


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