Igniting the Unique Potential of Colorado’s Students:
Designing Learning Environments for the Future of Learning

A next generation learning toolkit for innovative educators
Table of Contents

About This Toolkit ............................................................................................................................................. 2
  Purpose .......................................................................................................................................................... 3
  Keep in Mind ................................................................................................................................................ 3

Vision for Student Outcomes ............................................................................................................................ 4
  Making the Case ............................................................................................................................................ 5
  Competencies ............................................................................................................................................... 7

Learning Environments for the Future of Learning ........................................................................................... 9
  Personal and Personalized ............................................................................................................................ 11
  Competency-Based ...................................................................................................................................... 15
  Co-Created .................................................................................................................................................. 21
  Safe and Healthy ........................................................................................................................................ 25
  Time-, Talent-, and Technology-Enabled ....................................................................................................... 29

Putting It All Together: Pennington Elementary School .................................................................................... 33

Resource Directory .......................................................................................................................................... 35

Share Your Example ......................................................................................................................................... 44

Give Us Your Feedback .................................................................................................................................... 45
Increasingly, schools are working to provide students not only with a solid foundation in math, reading, and other academic subjects, but also personal, professional, and other 21st century student outcomes such as:

- Managing time.
- Collaborating with others.
- Taking risks.
- Learning from failure.
- Making decisions that contribute to our communities.

The Colorado Education Initiative’s (CEI) Next Generation Learning Initiative works to ensure that Colorado has:

- Learning environments designed to maximize these outcomes for students.
- Educators prepared to create these learning environments.
- Systems that promote and support educators in this effort.

In partnership with the Colorado Department of Education (CDE), CEI is working with educators to rethink when, where, and how learning and teaching take place and how schools could be fundamentally different in Colorado to respond to the unique needs, learning styles, interests, and skill levels of every student. CEI and CDE have identified the following shared leadership roles to drive strategic priorities for schools and districts:

- Promote a vision for next generation student outcomes and build the case for change.
- Connect people and ideas.
- Identify, promote, support, and legitimize early adopters.
- Establish supportive CDE policies and practices.
- Create environments for innovation at all levels.
Purpose

This toolkit promotes a vision for next generation student outcomes and builds the case for change. It connects people and ideas, and identifies, promotes, supports, and legitimates early adopters. The purpose is to empower educators to intentionally design learning environments that look and feel different from most of today’s classrooms — including those that are personalized; competency-based; co-created; safe and healthy; and time-, talent-, and technology-enabled. Although each is informed by thoughtful research and mapped back to student outcomes, in many ways this is uncharted territory. This approach combines what educators know about excellent instruction, student engagement, and motivation with support to help develop and test new ideas that address the evolving needs of 21st century learners and communities.

Keep in Mind

For CEI and CDE, the characteristics of the five learning environments have informed commitments we have made to ways of working that we hope you will consider, too. For example:

- **Co-Created** means we value meaningful collaboration, shared ownership, and responsiveness to user needs.

- **Competency-Based** means a belief in the importance of meeting different schools, districts, and communities at their unique points of readiness.

- **Personal and Personalized** means exactly that — not one specific model or approach, but a variety of instructional and structural strategies and supports.

This is not an exact science. The learning environments overlap and are not sequential. CEI’s Next Generation Learning Initiative provides a framework for placing research and practice in Colorado’s context, tied to a vision for Colorado’s students. Colorado educators use this framework for articulating their unique visions and building their cases for change.
for Student Outcomes

Our educational system was built more than a half-century ago to fuel an economy that no longer exists. We were good at predicting jobs and preparing students for those jobs. But careers have changed. A growing portion of the job market will be in industries that don’t yet exist.

Meeting the demands of the new economy means changes for schools. We have to ensure that students learn how to think, problem-solve, and work collaboratively. We need to create environments where students can learn to be creative, adaptive, and, most of all, understand how to advocate and apply their unique talents to an ever-shifting job market.

What doesn’t change? Public education continues to foster an engaged and intelligent democracy. Learning environments that celebrate and design for diversity of thought, empathy, and critical thinking will allow Colorado’s young people to make a difference in their communities and live rich, fulfilled lives.

We have to ensure that students learn how to think, problem-solve, and work collaboratively.
In 2013, 37% of first-year college students required at least one remediation course.

In 2012, only 14% of African-American students who enrolled in college completed a credential within four years.

In 2012, 32% of white students who enrolled in college completed a credential within four years.

Making the Case

Our education system is out of sync with today’s demands. Despite improvement and reform efforts underway, there is still evidence that students exiting Colorado’s K-12 education system aren’t ready to meet the demands of postsecondary education or the workforce.

Next generation learning environments can help students get excited about learning and develop the skills, self-knowledge, and drive they need to become happy, healthy, productive adults. The data don’t always present a complete picture of the outcomes necessary to ensure that all Colorado students are prepared to succeed in school, work, and life.

Continuing to operate a system designed for outdated societal and economic needs threatens equity gaps and also poses new ones.
For example:

- Research shows that students who persevere have four mindsets in common: I belong in this academic community, my ability and competency grow with my effort, I can succeed at this, and this work has value for me.\(^iv\)
- The last decade of Gallup polling reveals that one variable — the extent to which students feel hopeful about their future — predicts dropout and graduation more than any other, including grades and test scores.

...
Increasingly, schools are working to provide students not only with a solid foundation in math, reading, and other academic subjects, but also personal, professional, and other 21st century outcomes such as managing time, collaborating with others, taking risks, learning from failure, and making decisions that contribute to communities.

Colorado educators helped to shape these five competencies:

**Academic Competencies**

Students acquire math, reading, and writing skills and enough content knowledge to make sense of new ideas and information. They reason, analyze, synthesize, and evaluate information available to them in the digital age — and use their knowledge to solve problems across a wide range of contexts. These outcomes correspond symbolically to a student’s mind as these skill sets represent the basic analytic and intellectual powerhouse.
Professional: Time Management, Collaboration, and Lifelong Learning

Students learn to organize their own work to manage time and projects efficiently. They independently identify gaps in their capacity and generate plans to fill those gaps using a number of different approaches. Students with professional competencies independently apply their knowledge and skills to novel situations. They also learn to value others’ ideas and to collaborate to improve the overall quality of work. These outcomes correspond symbolically to a student’s hands, as these are many of the skills that a student will need to put his or her knowledge to practical use in professional environments.

Personal: Decision-Making That Plays to Individual Strengths

Students develop self-awareness of their interests and passions — and their strengths, weaknesses, and unique abilities. They learn how to work in ways that play to their strengths and interests, but also how to adjust to situations where they are not naturally comfortable. They learn how to initiate collaboration and advocate for support when they don’t have all the skills or knowledge to solve a problem. They understand how future career paths may align with their personal strengths and weaknesses. These outcomes correspond symbolically to a student’s heart, as a student gets to know his or her core, passions, and inspirations.

Entrepreneurial: Risk Management, Connections, and Learning from Failure

Students develop creative and divergent thinking skills. They make and capitalize on connections among diverse sets of content. They build strong personal networks of people they can work with, are willing to support, and can reach out to when they need support themselves. Students learn to manage risk and to learn, grow, and adapt in response to failure. These outcomes correspond symbolically to a student’s gut, as it develops a student’s skills to persevere in the face of adversity and to adjust his or her approach to take full advantage of any situation.

Civic: Contributing to the Workforce and Our Communities

Students develop a drive to contribute to their local and global communities and economies. They develop the desire to make the most of their unique potential as members of the workforce, the community, and a democratic society. These outcomes correspond symbolically to a student’s feet, as they are what propel a student forward to make good use of other competencies that have been developed.
Everything is designed.

The question is

ARE WE DOING IT PURPOSEFULLY OR BY ACCIDENT?

Learning environments are where and how learning happens. They comprise the place; time; structure; space; content; people; and instructional delivery, approach, and tools.

Working with Colorado educators, CEI and CDE researched best practices to help shape this first iteration of learning environments for the next generation of learners:
learning environments

- **Personal and Personalized**: Educators use a variety of data, approaches, partners, schedules, and media to best meet the needs of each student.

- **Competency-Based**: Students’ progress is based on assessed mastery of learning rather than seat time and grade level.

- **Co-Created**: Students play an active role in shaping their learning and own their educational outcomes.

- **Safe and Healthy**: Students are supported in maintaining active lives and in building self-awareness, confidence, and advocacy skills through safe, welcoming, and healthy learning environments.

- **Time-, Talent- , and Technology-Enabled**: Students and teachers have greater flexibility with time, place, and pace of learning. Time, talent, and technology are redesigned to maximize support for instructional priorities.

**Evaluate Yourself**

CEI and CDE created a self-assessment tool to help educators explore how their practices reflect these learning environments. Individuals or teams can use the 20-minute tool as a discussion starter and to facilitate reflection; it is not intended to compare teachers and schools.
personal and personalized

In personal and personalized learning environments, educators design instruction and experiences based on targeted information about students’ interests, learning styles, academic strengths and gaps, nonacademic strengths and gaps, and learning goals. They organize students in varying group sizes primarily according to their skills, needs, and interests, and provide educators with the information they need to know individual students well enough to adjust plans. In turn, this approach helps increase students’ opportunity to choose how, what, and when they learn.

Watch how personal and personalized learning environments make a difference.
Personal and Personalized Learning Environments

The Research

Interim results of a two-year RAND evaluation released in November 2014 found that students attending schools implementing personalized learning made above average gains in reading and math, particularly with the students who started furthest behind. These approaches included learner profiles, personal learning paths, competency-based progression, and flexible learning environments. ix

A Colorado Application

Colorado’s Graduation Guidelines create an incentive to shift toward personalized learning, such as focusing on competency-based progression rather than seat time; promoting personalized learning paths or multiple pathways for students to engage in learning; and requiring learner profiles that enable each student to be known well — and to know themselves — through completion of the Individual Career and Academic Plan (ICAP). ICAPs are learner profiles and personalized postsecondary plans for all students starting in ninth grade (Senate Bill 09-256).

Every kid in every school is a unique type of learner.
The days of lumping kids together are over.
What It Looks Like for Students

This day-in-the-life narrative is an example of what school might look like for 14-year-old Scott, who, along with his classmates, is designing an aquarium for a local zoo. Scott’s day begins as he books his schedule through an online calendar, meets with his teacher and classmates at the zoo to talk through their proposal with staff, interviews a wildlife expert, and takes literacy and fitness classes. The use of technology is impressive, as is how much choice Scott has in his learning.

What It Looks Like in Practice: Colorado Springs School District 11

The world is changing. Meet the future. That’s the motto at Colorado Springs School District 11 (D11) in Colorado Springs, Colo., where educators have spent several years prototyping a personalized learning model to better meet the needs of its more than 29,000 students in 60 schools. Here are some highlights:

Five Key Decisions

D11 started by creating a clear vision of student outcomes in the 21st century (read about the D11 ACHIEVE Graduate) and identifying five components of personalized learning:

1. **Nurture a positive culture.** Each relationship in the school community — whether it be administration and staff, educators and students, or students and the community — should create the conditions for innovation, risk taking, and collaboration. D11 believes that personalization truly can take place only with an open, participatory, and positive environment. Explore D11’s resource page, which is filled with artifacts and models to help foster a positive school culture.

2. **Know your learners.** D11 works to gather data about students’ strengths and gaps so that educators can create customized learning mapped to students’ needs, aspirations, experiences, and skills. (This Blackboard video explains what educators look for when creating an active learning environment.)

3. **Design for personalized thinking.** D11 encourages teachers to rethink how they use their classroom’s physical environment to promote student comfort, choice, and ownership of space. See how D11 helps teachers support personalization both in and out of the classroom.

4. **Reimagine educators’ roles.** D11 moves educators from all-knowing lecturers to facilitators of learning experiences. Because this transition isn’t always easy, the district dedicates professional learning time to creating a culture where teachers provide students the skills they need and then slowly let go.

5. **Scrap traditional scheduling.** Refusing to let an inflexible schedule interfere with student learning, D11 focuses on building an anytime/anywhere model of learning. D11 engages community partners to provide learning outside the classroom and leverages technology to impact how, when, and what students learn.
• I/we help students find ways to challenge themselves and go beyond what they already know and can do. (academic, personal)

• I/we help students discover which learning and work styles are natural for them and how to function when those styles aren’t available. (professional, personal)

• I/we present new learning using a variety of instructional methods and attending to a range of learning styles. (academic)

• I/we use all the information we have about each student as both a learner and an individual to make learning relevant and engaging. (academic, professional, entrepreneurial)

• I/we communicate to students that they are trusted, relied upon, and valued as both individual contributors and members of our community. (academic, professional, entrepreneurial, personal, civic)

See the complete self-assessment here.

## evaluate yourself

### more

These resources can help schools and districts create personal and personalized learning environments for students. Descriptions of each resource can be found in the resource directory.

### Models
- Lighting the Path to Personalized Learning: Inspiring Stories from Next Gen Schools
- Intrinsic School: Designing for a New Teaching Model

### Professional Development
- Introduction to Next Generation Learning

### Tools
- G&D Associates’ Self-Review of Technology to Support Personalized Learning

### Recommended Reading
- Personalization in Schools
- Inevitable: Mass Customized Learning

### Communication Materials
- Personalized Learning: A Summary
competency-based

In competency-based learning environments, students move from level to level based on demonstrated competency, get feedback against competencies, and track their own progress with support from their teacher. Monitoring student progress against competencies instead of seat time gives educators a better measure and more nuanced understanding of what students know and are able to do based on the Colorado Academic Standards.

Watch how competency-based learning environments make a difference.
Competency-Based Learning Environments

The Research

Educators and researchers at CompetencyWorks.org have created a working definition of high-quality competency education that includes five key design principles:

- Students advance upon demonstrated mastery — when they are ready and have demonstrated what they have learned.
- Competencies include explicit, measurable, transferable learning objectives that students know and understand. (In Colorado, they’re aligned with the Colorado Academic Standards, English Language Proficiency Standards, and Career and Technical Education standards.)
- Assessment is meaningful and is a positive learning experience for students.
- Students receive timely, differentiated support based on their individual learning needs.
- Learning outcomes emphasize competencies that include applying and creating knowledge, and developing important skills and dispositions.
A Colorado Application

Colorado’s Graduation Guidelines create the opportunity for districts to shift systems toward competency-based progression by:

- Focusing on competency-based requirements rather than seat time.
- Providing students with a menu of options (e.g., portfolios and capstone projects) to demonstrate readiness rather than a single exit exam.
- Promoting multiple pathways for student learning.
- Reinforcing the next generation learning student outcomes.

Colorado is one of 13 states currently participating in Achieve’s Competency-Based Pathways State Partnership to support states in advancing competency-based pathways designed to reinforce state academic standards toward college and career readiness for all students.

What It Looks Like in Practice: Adams County School District 50

Adams County School District 50 (Adams 50) in Westminster, Colo., uses a competency-based system districtwide. Learning is the constant and time is the variable, which allows the district’s more than 10,000 students to learn at their own pace and provides educators with the data and structures they need.

Adams 50’s model is based on four core beliefs: learning is the constant, time is the variable, delivery is personalized, and the approach is systemic and systematic. Here’s how the district describes each belief:

Learning is the Constant

- Learners are placed at their appropriate developmental instructional level in each of 10 content areas based on demonstrated performance.
- Curriculum is “guaranteed and viable,” where the learning targets (standards) and supporting materials are made explicit and available to teachers, students, and parents.
- Evidence toward proficiency for all learning targets is measured and recorded over time. The learner must score proficient or better before beginning the next performance level.
- Learning progress is scored and reported on a proficiency scale from 0.0 through 4.0. There are no traditional letter grades.
Time is the Variable

- Learners advance (progression) to the next performance level in a content area once they achieve proficiency or better — and it is validated. There are no traditional grade levels.
- Progression can occur at any point during the course of the year for any content area.
- At the beginning of the traditional school year, learners resume their learning at the point where they left off the previous year (continuous flow). There is no social promotion.
- Learners are typically in different performance levels for different content areas.
- Multiage classrooms are the norm not the exception.

Personalized Delivery

- Learners progress purposefully at their own pace with teacher guidance based on demonstrating proficiency or better learning targets.
- Learning is personalized through goal setting, choice, and voice with appropriate instruction.
- Multiple opportunities over time are provided to demonstrate and verify competency of learning targets.
- Support and scaffolding for any struggling learner are provided through the blended services model to meet the area of need. There is no retention.

Systemic and Systematic Approach

- A shared vision is created across all levels and departments.
- Common classroom practices, expectations, and instructional language are employed across all schools for educators and learners.
- Universal structures, support systems, and standard operating procedures are used across the district.
- Collective competency-based system reform support is achieved through resolutions, policy changes, budget reallocations, and changes to the daily schedule and school calendar by the Board of Education and Westminster Education Association.

Impact

In 2009, a third of the district’s 21 schools were the lowest performing in the state, putting Adams 50 in the Priority Improvement category. Within two years of moving to a competency-based system, the district no longer has any schools in turnaround status, and the graduation rate keeps increasing, reaching 73 percent in 2013.

Dig In

Check out this interview with the Adams 50 leadership team to learn why they moved to a competency-based system and to hear lessons learned.

Adams 50’s model is based on four core beliefs:

learning is the constant, time is the variable, delivery is personalized, and the approach is systemic and systematic.
Colorado is one of 13 states currently participating in Achieve’s Competency-Based Pathways State Partnership to support states in advancing competency-based pathways designed to reinforce state academic standards toward college and career readiness for all students.
These resources can help schools and districts move along a continuum toward competency-based systems. Descriptions of each resource can be found in the resource directory.

**Models**
- Lindsay Unified School District
- Summit Public Schools

**Professional Development Resources**
- Proficiency-Based Learning Simplified

**Tools**
- Roadmap for Competency-Based Systems
- Portfolio and Capstone Guidebook

**Recommended Reading**
- Understanding Competency Education in K-12
- Accountability for College and Career Readiness: Developing a New Paradigm
- Advancing Competency-Based Pathways to College and Career Readiness: A State Policy Framework for Graduation Requirements, Assessment and Accountability
- Competency-Based Education in Three Pilot Programs
- New Hampshire’s Story of Transformation

**Communication Materials**
- Competency-Based Pathways Communications Toolkit
- Graduation Guidelines Engagement Toolkit
co-created

In co-created learning environments, students are proactive and make important decisions about their progress toward learning goals. Educators and students work together to create learning experiences. Students work with each other, teachers, and other resources in and outside the classroom to develop goals and determine the best way to achieve the goals as a team.

Watch why co-created learning environments make a difference.
Co-Created Learning Environments

The Research
Co-created learning environments are dependent on student engagement and ownership of learning. In 2015, the National Association of State Boards of Education defined student engagement as “the capacity and inclination for students to take ownership of past, present, and future educational experiences by investing cognitively, behaviorally, and emotionally in their learning.”

A Colorado Application
Senate Bill 10-191 requires educators to be evaluated every year. Colorado’s State Model Evaluation System, used by the vast majority of school districts, provides evaluators with a rubric for guiding observations and evaluations. In order for educators to be rated “accomplished” or “exemplary” on the rubric, the evaluator focuses on students’ behavior to demonstrate ownership of their own learning.
What It Looks Like in Practice: Denver School of Science and Technology

Educator Jim Stephens says the first step in designing a co-created classroom culture and learning agenda is building relationships and trust among everyone in the classroom. Students and educators start by reflecting on who they are as individuals and collectively, what’s important to them and how they see the future. Next, Stephens recommends working through four steps to set levels of intention:

1. Purpose
   Idea: The purpose of the class is to make the world a better place.
   Facilitating a conversation with students: What problems in the world do they want to solve? How will this class help them do it?

2. Human-Centered Design
   Idea: As the next generation in an ever-changing world, students are the superheroes (Teen Titans).
   Method: Using human-centered design to determine what people need.
   Facilitating a conversation with students: What’s human-centered design? How does it work? Test it in practice.

3. Innovation and Collaboration
   Idea: The old ways of solving problems no longer work. Creativity is a must.
   Method: Co-creating interdisciplinary design teams.
   Facilitating a conversation with students: Teams with different classes and teachers create interdisciplinary solutions.

4. My Purpose
   Idea: Educators co-create an environment with students where they can identify problems they are passionate about. Teachers support student problem-solving while meeting their academic needs.
   Method: Problem/solution-based learning to make learning authentic and relevant to students.
   Facilitating a conversation with students: Students interview each other about their passions. Then they help each other work backward from those passions to build out what competencies they need to master to achieve their goals.

Dig In
Check out this video to learn how the Denver School of Science and Technology embedded expanded time, technology, core values, and a strong data culture to increase student engagement, student ownership, and educator effectiveness.
• I/we empower students to lead classroom/school culture and norms. (entrepreneurial, civic)
• I/we provide opportunities for students to collaborate with one another and actively learn from one another rather than only learning from adults. (professional)
• I/we provide students with opportunities to take creative and important risks in which they can experience helpful failures. (entrepreneurial, personal)
• I/we support students to actively monitor their own progress and use information about their current performance, next steps, and goals to make choices about their use of time and resources (including instruction, access to technology, peers, experts, text, etc.). (professional, personal)

• I/we create situations where students are engaged in group work and held accountable to each other in achieving outcomes. (professional, civic)
• I/we offer opportunities for students to engage in and choose among experiential, internship, and/or service learning opportunities through which they can apply their interests and skills. (personal, civic)

See the complete self-assessment here.

---

**evaluate yourself more**

These resources can help support and spark co-created learning environments. Descriptions of each resource can be found in the resource directory.

**Models**
- Design Tech (d.tech) High School
- Kunskapsskolan
- New Tech Network

**Professional Development Resources**
- Buck Institute for Education Project-Based Learning Resources
- Motivation, Engagement, and Student Voice Professional Development Series

**Tools**
- Students as Change Agents: The Use of Student Perception Survey and Climate Data
- Student Perception Survey Toolkit
- The Design Thinking Toolkit for Educators

**Recommended Reading**
- Putting Students at the Center: A Reference Guide
- ‘The Independent Project’: High School Allows Teens to Decide Their Own Curriculum
safe and healthy

In safe and healthy learning environments, significant attention is paid to knowing the social-emotional needs of students and teaching them healthy ways to think, work, and play together. All children need to be in an environment that’s secure and supportive, where they are comfortable taking risks. Students can’t learn when they are hungry, suffering, or lonely. To inspire students to become empathetic, curious, and healthy participants, educators must build cultures that foster self-awareness, confidence, and strong mental and physical health in students.

Watch why safe and healthy learning environments make a difference.
Safe and Healthy Learning Environments

The Research

Research on safe and healthy learning environments focus on the whole child and how to meet the child’s unique needs to maximize student achievement.

- One study found that after implementing a program to improve nutrition and physical activity, an elementary school reported a year-over-year decrease in the number of counseling and disciplinary referrals per 100 students and an increase in standardized test scores.\textsuperscript{xii}
- Students who receive social and emotional learning instruction have academic achievement scores an average of 11 percentage points higher than students who do not participate in social and emotional learning programs.\textsuperscript{xiii}

A Colorado Application

Colorado has a strong history of passing and implementing legislation supportive of safe and healthy learning environments. In 2015, CEI produced a comprehensive directory of relevant federal and state legislation, including physical health and nutrition; social, emotional, and mental health; school health services; healthy school environment; and health education.
After studying the results and realizing their predictions were different from their classmates’ predictions, students worked together to create shared definitions of the survey categories and designed action plans to improve areas where scores were low.

**What It Looks Like in Practice: Dolores School District**

At Dolores School District in Dolores, Colo., students are leading the charge in building a culture where all learners feel safe and supported. The work began with an analysis of Colorado’s Student Perception Survey data focusing on student learning, student-centered environment, classroom community, and classroom management.

Students met twice — once in the fall and again in the spring — to compare their predictions of what the survey data would look like to the actual results. After studying the results and realizing their predictions were different from their classmates’ predictions, students worked together to create shared definitions of the survey categories and designed action plans to improve areas where scores were low. The action plans included what students wanted to do about the issue; how it addressed the concern; what activities and/or steps were involved; when it would take place; and which students would lead the initiative.

**Impact**

*Watch* the video below to see the impact of students’ action plans.
I/we prioritize physical activity in the classroom due to its positive connections to student learning. (academic)
I/we encourage students to express their physical, emotional, and mental health needs, and advocate for themselves and others. (professional, personal, civic)
I/we build high-trust relationships by modeling, teaching, and holding students and my/our colleagues accountable for respectful, healthy, professional behavior. (professional, personal)
I/we help students identify and leverage their strengths to develop a positive self-concept and motivation to learn. (personal, civic)
I/we help students build skills to persevere; manage emotions; and cope with disappointment, anxiety, and other stressors in their lives. (entrepreneurial, personal)

See the complete self-assessment here.

Models
- Allies Day at Manhattan Middle School
- Diversity Day at Rangeview High School
- Transforming School Culture: Creating Safe, Caring and Engaging Schools at Poudre High School

Professional Development Resources
- Healthy Schools Best Practices Guide

Tools
- Teacher Toolbox for Physical Activity Breaks in Secondary Classroom
- Red Hawk Elementary Movement Toolkit
- Colorado Framework for School Behavioral Health

Recommended Reading
- The Missing Piece: A National Teacher Survey on How Social and Emotional Learning Can Empower Children and Transform Schools
- Mindset: The New Psychology of Success
- Teaching Adolescents to Become Learners: The Role of Noncognitive Factors in Shaping School Performance

These resources can help schools and districts design a safe and healthy learning environment for students. Descriptions of each resource can be found in the resource directory.

More

Safe and healthy

Evaluate yourself

Learn more
time-, talent-, and technology-enabled

Time-, talent-, and technology-enabled learning environments all inform instruction, but are secondary to it. They are important elements, but they shouldn’t drive learning and instructional decisions. Instead, time, talent, and technology are flexible and dynamic tools to help educators create learning environments that lead to desired student outcomes.

Watch why time-, talent-, and technology make a difference.
Time, Talent-, and Technology-Enabled Learning Environments

**Time**
School schedules are more flexible to ensure students get exactly what they need when they need it — whether it’s deeper intervention, more challenging work, or engaging enrichments. Schedules are driven by what’s best for students instead of traditional drivers such as bus schedules.

**Talent**
Adults play a broader role in facilitating learning experiences. Traditional staffing models are revised to support new roles for teachers and students.

**Technology**
Technology, like time and talent, should not lead the change, but it should enable teachers to personalize instruction or help a school realize its mission. For example, a learning management system could let students and teachers track progress and provide anytime, anywhere support in and outside the classroom. Or a new data system could allow educators to collaborate and see where students are progressing and where they are struggling. A digital portfolio created by each student could document learning throughout high school.
What It Looks Like in Practice (Time): Colorado’s TIME Collaborative

The TIME Collaborative is a partnership of the Ford Foundation, National Center on Time & Learning (NCTL), CDE, and CEI to help three Colorado districts and 12 schools rethink the role time plays in their learning environments. These teams worked closely with NCTL, CEI, and CDE to design a school day and year that is personalized to the unique needs of their students and community. The redesign process involved technical assistance and targeted coaching with each school team. Plans focused on integrating NCTL’s Seven Essential Elements for more and better learning time with school and district priorities. Design teams included educators, school and district leaders, community partners, and parents who created a plan to provide up to 1,440 hours, which is considered a best practice by NCTL, of high-quality learning time for students.

Seven Essential Elements of High-Quality Expanded Learning

Time Schools:

1. Focused schoolwide priorities
2. Rigorous academics
3. Differentiated supports
4. Frequent data cycles
5. Targeted teacher development
6. Engaging enrichment
7. Enhanced school culture

Colorado’s TIME Collaborative placed a priority on schools and districts serving students and families of poverty, high minority populations, rural populations, and Title I funding eligibility. The 12 schools engaged in the Colorado TIME Collaborative have among the highest minority and poverty concentrations in their districts.

What It Looks Like in Practice (Technology): San Luis Valley Consortium

In a rural and high poverty region of Colorado, the 14-member school districts of the San Luis Valley Consortium set out to co-create blended learning model classrooms, including purchasing iPads or other tablets, and providing training to educators on how to use these tools to improve instruction and student outcomes. CEI funded the effort, which included a partnership with the Colorado-based JDO Foundation. Here are some high-level successes:

- Technology purchases supported 12 model classrooms across the 14 districts in the valley. Most districts leveraged grant funds to encourage local investments to purchase more devices and to provide more students with access to technology.
- Schools provided instructional devices for students to use in school and at home. This expanded learning time and allowed for more personalized instruction and opportunities for families to support their child’s learning.
- The consortium designed and provided professional development through a district Trainer of Trainers program to build capacity among trainers who could translate learnings back to their school community. Trainings included content on instructional applications to use with students and support for digital citizenship and Internet safety.
- Participating schools received student licenses for AirWatch, a mobile device management system that manages instructional application tracking and syncing and provides user security.
- District technology directors increased their capacity by integrating AirWatch into accompanying training. As a result, the districts were better able to adopt new technology infrastructure to support learning environments.
• I/we use technology to provide students with real-time feedback and data displays that enable students to monitor their own progress.
• I/we use technology to expand student access to content and varied methods for building knowledge, practicing skills, and organizing information.

See the complete self-assessment here.

**evaluate yourself**

**more**

These resources can help schools and districts rethink and redesign time, talent, and technology. Descriptions of each resource can be found in the resource directory.

**Models**
- Grant Beacon Middle School
- West Generation Academy
- D11’s Station Rotation Models
- Merit Prep Newark’s Blended Learning Space
- Coalition for Community Schools

**Tools**
- The Time for Equity Indicators Framework
- NCTL’s School Time Analysis Tool
- Opportunity Culture
- Guide to Student Data Privacy

**Professional Development Resources**
- School by Design
- The Basics of Blended Learning
- So You Think You Want to Innovate?
- Leveraging Partners to Personalize Learning

**Recommended Reading**
- Blended Learning Implementation Guide
- Cost-Effective Strategies for Extended Learning Time and Expanded Opportunity in K-12 Education
- Preparing Teachers for Deeper Learning
- Student Mathematics Performance in the First Two Years of *Teach to One Math*
- Blended Learning Report
To tackle the exhausting realities of poverty, Jeffco Public Schools’ Pennington Elementary School in Wheat Ridge, Colo., expanded its school day starting in 2013-2014 from a seven-hour day to an eight-and-a-half-hour day, staying within the bounds of educators’ contracts. This approach has led to a boost in student learning, excitement, and school culture. Pennington leveraged each of the next generation learning environment characteristics:

**Personal and Personalized:** Pennington educators use data to provide interventions or extensions that students need in core academic subjects. Students get to choose their enrichment schedule (more than 90 choices!) that’s personalized to their passions.

**Competency-Based:** Pennington flexibly groups students based on mastery of districtwide competencies. Each enrichment course, provided by community partners and school staff, intentionally builds mastery through the completion of a final project or new skill.

**Co-Created:** In 2012, students, parents, community partners, educators, and staff built Pennington’s Expanded Learning Time model together. Student, family, and community voices continue to help drive conversations. Three times a year, stakeholders meet to discuss what’s working and what needs to be improved.

**Safe and Healthy:** Learning can’t happen if students don’t feel safe and their basic needs are not met, according to Pennington Principal Sandy Craig. The school’s number one mission is to support the whole child by providing a safe and healthy learning environment. Pennington now is a full-service community school with an in-house food, clothing, and hygiene bank; adult learning classes; and budget resources.
Evidence of Impact

The expanded learning time model provided the structure Pennington needed to improve student achievement and growth, close the opportunity gap, and meet the needs of the whole child, Craig said. Before the school implemented the new model, time was always at a premium. “But now we have enough time to flexibly group our kids,” she said. “We have enough time to give solid core instruction. We have enough time to collaborate.”

All of these changes have led to a boost in student learning, excitement, and school culture. Here are some of the most impressive findings to date:

- Pennington’s State School Performance Framework increased by 18.8 percent. The school performance framework is the most important grade given to schools in Colorado, Craig said. The framework's grade accounts for academic achievement, academic longitudinal growth, academic growth gaps, and postsecondary and workforce readiness.
- Pennington received a PTA School of Excellence award for its work with parent involvement and feedback from parent surveys. Pennington was one of two schools in Jeffco’s 154-school district to receive the award.
- Out-of-school suspensions have decreased 80 percent.
- Attendance at family-teacher conferences has increased from 50 percent in the 2012-2013 school year to 89 percent in the 2013-2014 school year.

Goals of Expanded Learning Time at Pennington

Expanded learning time created the conditions for Pennington to work toward three goals:

- Increase student achievement and growth.
- Close the opportunity gap.
- Serve the whole community.

Interested in learning about Pennington’s strategies for accomplishing these goals? Check out our interactive case study on the school’s model.
This section provides detailed descriptions of each of the resources previously listed within each learning environment throughout this toolkit. These resources are grouped by learning environment and offer examples of models, professional development options, tools, recommended reading, and communication resources.

**Personal and Personalized**

*These resources can help schools and districts create personal and personalized learning environments for students.*

**Models**

- **Lighting the Path to Personalized Learning: Inspiring Stories from Next Gen Schools.** This report, created by Next Generation Learning Challenges and the Getting Smart team, takes you to 14 schools around the country that are implementing personalized learning environments.

- **Intrinsic School: Designing for a New Teaching Model.** What does it look like inside a school that has redesigned its classrooms to promote personalized learning? Intrinsic School in Chicago hired an architecture firm to do just that. Take a tour of the space.

**Professional Development**

- **Introduction to Next Generation Learning.** Colorado Springs School District 11 designed a self-paced exploration for its educators, which will take you through the district’s personalized learning model, a variety of instructional strategies, great resources on learning environment, time, staffing, and more. Consider taking the course by yourself or with a team at your school. Maybe you will make your own course to fit your school’s vision.

**Tools**

- **G&D Associates’ Self-Review of Technology to Support Personalized Learning.** Are you personalizing learning? This online tool can help you assess — on a school and district level — where you are in establishing personalized systems across learning, teaching, leadership, professional development, and community engagement.
**Recommended Reading**

- **Personalization in Schools.** A good read about the evolution of personalization and how it connects to the historical arc of K-12 reforms.
- **Inevitable: Mass Customized Learning.** Think of all the products and services out there like iTunes, Amazon, and Netflix that personalize your experience based on your preferences. This book takes the idea of mass customization to the world of education.

**Communication Materials**

- **Personalized Learning: A Summary.** Use this presentation from Next Generation Learning Challenges as a conversation starter about the components of personalized learning and successful practices.

**Competency-Based**

*These resources can help schools and districts move toward competency-based systems.*

**Models**

- **Lindsay Unified School District in California** is transforming its entire system to a personalized, performance-based system. This case study by CompetencyWorks explores the design elements of the district’s model, including student goals, curriculum, instruction, assessment, monitoring and feedback, and grading. Explore the district’s Strategic Design to read its full vision.

- **Summit Public Schools**, a school network in California’s Bay Area, is a pioneer in competency-based and blended learning. Summit’s website provides a wealth of resources to explore its approach to college readiness, teaching, professional development, and innovation.

**Professional Development Resources**

- **Proficiency-Based Learning Simplified** by Great Schools’ Partnership helps school leaders and educators think through the design and implementation of a proficiency-based system, including writing standards to capture learning expectations, identifying assessments, monitoring progress, and providing opportunities for students to show what they know.

**Tools**

- **Roadmap for Competency-Based Systems.** What technology decisions, policies, and conditions do you need to implement a competency-based learning system at scale? This interactive tool by the Council of Chief State School Officers and education design lab 2Revolutions helps you explore the choices state and district leaders need to make along the way. (For example, what learning management system best fits your vision? How much bandwidth does each of your schools need?) The tool provides case studies of districts that have made the leap to competency-based learning.
• Portfolio and Capstone Guidebook. CDE, in partnership with the Asia Society, created this guidebook to offer schools and districts resources to support the development of quality portfolio and/or capstone systems as part of graduation requirements. It offers examples of portfolio products, capstone experiences, examples, and ideas to get teams started.

Recommended Reading
• Understanding Competency Education in K-12. This CompetencyWorks brief provides a snapshot of what competency education is, how it improves learning for students, how it works, where it’s working, and how states are revising policy to move in this direction.
• Accountability for College and Career Readiness: Developing a New Paradigm. This report, published by Stanford Center for Opportunity Policy in Education, looks at what accountability and assessment in the era of college- and career-ready standards could look like; what types of measures might be used to assess student learning on a systemwide scale; and what’s happening in different communities across the country.
• Advancing Competency-Based Pathways to College and Career Readiness: A State Policy Framework for Graduation Requirements, Assessment and Accountability. If you’re a state leader working toward statewide implementation of a competency-based learning system, this framework could be a huge help. Created by Achieve, the framework explores three major policy shifts — graduation requirements, summative assessments, and accountability systems — and moves leadership teams through visioning exercises and critical questions.
• Competency-Based Education in Three Pilot Programs. This RAND research report evaluates the competency-based efforts of sites, citing trends in implementation, student experience, and student performance.
• New Hampshire’s Story of Transformation. This interactive publication tells the story of New Hampshire’s successes and struggles as it transforms its entire education system to competency-based learning.

Communication Materials
• Competency-Based Pathways Communications Toolkit. This Achieve toolkit was designed for states, but can be adapted for use by districts, advocates, and others involved in discussions about competency-based pathways and stakeholder engagement. The tools include resources on how to develop compelling messages, examples, and frequently asked questions.
• Graduation Guidelines Engagement Toolkit. Created by CDE, this toolkit is designed to support school board members,
superintendents, and school district administrators as they delve into Colorado’s Graduation Guidelines, with draft to-do lists for implementation and communications ideas.

Co-Created

These resources can help support and spark co-created learning environments.

Models

- **Design Tech (d.tech) High School** applies the co-created mindset of design thinking — where learners experiment, prototype, build, and create — to the learning experience. At d.tech, students are mastering high standards by solving real-world problems, all of which are planned and coordinated in partnership with their educators.

- **Kunskapsskolan**, based out of Sweden, operates and designs personalized learning schools where students truly are at the center. The organization pushes educators to turn the traditional idea of school on its head — put the student at the center of all designs.

- **New Tech Network**, If you are interested in pursuing project-based learning as a method for rich, co-created learning experiences, check out New Tech Network. The New Tech model provides an instructional approach, used by schools from across the country, centered on technology-enabled project-based learning powered by a culture that empowers its students and educators.

Professional Development Resources

- See what project-based learning looks like in practice through the Buck Institute for Education’s resources, which include planning forms, student handouts, rubrics, and articles for educators to download and use to design, assess, and manage projects.

- **Motivation, Engagement, and Student Voice Professional Development Series** is a four-module professional learning series that you can use and adapt for your own team’s growth. The modules take educators through a series of activities and learning experiences to consider, push thinking, design and discuss student motivation and engagement, and nurture self-regulation and student voice.

Tools

- **Students as Change Agents: The Use of Student Perception Survey and Climate Data**. This video explores how Dolores (Colo.) School District has used data with students to explore their school culture and create student-driven plans to improve it. CEI developed this Student Perception Survey Toolkit as a resource for other school districts interested in facilitating a similar process. All of the materials used by the Dolores School District are provided, including meeting agendas and student worksheets.
more Resource Directory

Safe and Healthy

These resources can help schools and districts design a safe and healthy learning environment for students.

Models

Check out these videos about Colorado students and teachers who are working together to co-create cultures and learning environments where students feel respected, safe, and confident to take risks and be themselves:

- Allies Day at Manhattan Middle School.
- Diversity Day at Rangeview High School.
- Transforming School Culture: Creating Safe, Caring and Engaging Schools at Poudre High School.

Professional Development Resources

- Healthy Schools Best Practices Guide. CEI published this guide as a roadmap to improving student and staff health, nutrition, and wellness in every district across Colorado. These best practices highlighted in this resource help districts develop a comprehensive and coordinated approach to healthy schools.

Tools

- Teacher Toolbox for Physical Activity Breaks in Secondary Classroom. Research shows that physical activity affects the brain in ways that allow students to be ready to learn.

Recommended Reading

- Putting Students at the Center: A Reference Guide. Published by Nellie Mae Education Foundation, this reference guide was written for practitioners providing best practices and research on young adults’ minds, brain, and learning, all aimed at helping ensure all students can engage deeply civically and academically for success in college, career, and life.

- ‘The Independent Project’: High School Allows Teens to Decide Their Own Curriculum. If students designed their own school, what would it look like? This Huffington Post article and accompanying video lets you peek into one example of how it might look, as a small cohort of high school students in Massachusetts participate in a completely student-driven and constructed semester of learning, called the Independent Project. Spoiler alert: The teens are spirited and engaged, and tough questions guide the learning.

- The Design Thinking Toolkit for Educators. Created by leading design and innovation consulting firm IDEO, this toolkit contains a design thinking process overview, methods, and instructions that help educators put design thinking into action. Also included is the Designer’s Workbook, which helps educators create solutions to design challenges.

- The Design Thinking Toolkit for Educators. Created by leading design and innovation consulting firm IDEO, this toolkit contains a design thinking process overview, methods, and instructions that help educators put design thinking into action. Also included is the Designer’s Workbook, which helps educators create solutions to design challenges.
CEI developed this guide to offer practical tools from across the nation and Colorado to create and implement activity breaks in secondary classrooms.

- **Red Hawk Elementary Movement Toolkit.** This toolkit provides the know-how to bring a movement program to life. Red Hawk’s program is inexpensive and relies on the support of teachers, staff, students, and parents.

- **Colorado Framework for School Behavioral Health.** This guide to K-12 student behavioral health focuses on prevention, early intervention, and intervention for students’ social, emotional, and behavioral health needs.

- **Transforming School Climate Toolkit.** This toolkit presents four strategies for creating a supportive environment by empowering students to be change agents, creating a community of upstanding citizens, facilitating adult practice change through professional development and policy, and using data to drive decisions.

**Recommended Reading**


- **Mindset: The New Psychology of Success.** According to Stanford psychologist Carol Dweck, parents and educators can motivate students to raise their grades and reach other goals by encouraging them to adopt a growth mindset.

- **Teaching Adolescents to Become Learners: The Role of Noncognitive Factors in Shaping School Performance.** This literature review, published by the University of Chicago Consortium on Chicago School Research, presents research about five categories of noncognitive factors related to academic performance: academic behaviors, academic perseverance, academic mindsets, learning strategies, and social skills.
These resources can help schools and districts rethink and redesign their use of time, talent, and technology to enable student outcomes and other learning environment characteristics for the future.

Models

Grant Beacon Middle School in downtown Denver serves more than 400 sixth-through eighth-graders and has transformed its approach to learning by leveraging technology and expanding the school day.

West Generation Academy, part of the Generation Schools Network, has reconsidered time and talent by engaging business and community partners to personalize learning for students and expand planning and support for educators.

Colorado Springs School District 11’s station rotation models leverage technology and blended learning to enable shifts in learner and teacher roles as well as in how students engage in and build ownership for their learning.

Merit Prep Newark’s Blended Learning Space. Merit Prep, a fully blended school in Newark, N.J., redesigned its physical environment to use a tech-enabled model. This research brief from Next Generation Learning Challenges describes the new classroom and school design.

Coalition for Community Schools. By expanding learning time during the day and year, providing family wraparound services, and engaging high-quality community partners, community schools effectively enable both time and talent to benefit learners.
Tools

The Time for Equity Indicators Framework. This tool provides a comprehensive set of indicators to document how expanded time and learning opportunities can transform the lives of students, the structure of schools, and the power of communities.

NCTL’s School Time Analysis Tool. Want to rethink time? This tool from NCTL helps schools and districts understand how they are currently using time throughout the week and year. The teacher tool helps educators identify how they are using time in their classrooms.

Opportunity Culture. This website is a treasure-trove of models, tools, policies, and other resources aimed at helping schools and districts redesign their staffing models to “extend the reach of excellent teachers.”

Guide to Student Data Privacy. Created by edSurge, this guide offers resources, opinion pieces, checklists, and tools to protect student privacy while personalizing learning.

Professional Development Resources

School by Design. This comprehensive planning and support package from Amplify can help schools and districts analyze the resources they have and decide the best configurations to maximize student learning.

The Basics of Blended Learning. This video by Education Elements is a good conversation starter for schools and districts adopting a blended learning environment.

So You Think You Want to Innovate? This tool from 2Revolutions and The Learning Accelerator helps educators assess where their organization is on the continuum of an innovation culture and how to improve it over time to ensure their next generation learning environment sticks.

In fall 2014, CEI hosted Leveraging Partners to Personalize Learning, a five-part webinar series to support schools and districts in rethinking how they use time, talent, and resources to redesign their school day and year. Each webinar addresses a topic important to effective integration of partners into the school day and year, and includes Colorado school examples as well as speakers from Colorado’s TIME Collaborative, NCTL, and Children’s Aid Society.

Recommended Reading

Digital Learning Now’s Blended Learning Implementation Guide 2.0 can help leaders create the conditions for success in planning, implementing, and evaluating their blended learning efforts.
Cost-Effective Strategies for Extended Learning Time and Expanded Opportunity in K-12 Education. This report by Generation Schools Network, which has launched schools in Denver and Brooklyn, N.Y., walks through how it has made expanded learning time cost-effective and sustainable, and how schools and districts can do the same.

Preparing Teachers for Deeper Learning. This report by Getting Smart and Digital Promise examines what next generation learning means for educators, what competencies educators need, what support they want, and how schools and districts can create the conditions for success through personalized professional development and other opportunities.

Student Mathematics Performance in the First Two Years of Teach to One Math. This 2014 research study tracked the impact of the implementation of a blended learning math program across seven urban areas. The researcher found that the students in the program had learning gains that were roughly 15 percent higher than the national average.

Blended Learning Report. In this report, sponsored by SRI International Center for Technology and the Michael & Susan Dell Foundation, researchers studied selected schools in California and Louisiana that implemented blended learning models. The report presents a wide range of qualitative and quantitative data points, such as educator confidence, experiences with digital content programs, and usefulness of the work.
Share Your Example

Are you designing learning environments that look and feel like those in this toolkit? Are you seeing indicators of academic, professional, entrepreneurial, personal, or civic competencies? We would love to hear what you are doing and how you used this toolkit. We will follow up with you to discuss your suggested example so that it might be included to share with other educators.

Send us an email at info@coloradoedinitiative.org with the following information:

1. Describe your experience using this toolkit to design learning environments for the future of learning. What worked?
2. What were the challenges you encountered?
3. Of the student outcomes and environments outlined in this toolkit, which best correspond with your experience?
4. Provide your contact information:
   • Name.
   • School, district, or organization.
   • Email address and telephone number.
Give Us Your Feedback

Send us an email at info@coloradoeducationinitiative.org with the following information:

1. How was this tool useful to you?
2. How could we improve this tool?
3. What else would you like to share about your experience with this tool?
Endnotes


The Colorado Education Initiative is an independent nonprofit working in partnership with the Colorado Department of Education to unlock the unique potential of every student by incubating innovation, shining a spotlight on success, and investing in sustainable change that improves outcomes for all students. CEI envisions that every student in Colorado is prepared and unafraid to succeed in school, work, and life, and ready to take on the challenges of today, tomorrow, and beyond.