Why Competency-Based Education?
At a record high, 84 percent of public high school students reach graduation, as measured by the adjusted cohort graduation rate (ACGR), according to the National Center for Education Statistics.

According to the National Conference on State Legislators, 28-40 percent of all first-time undergraduates enroll in at least one remedial course. Less than 50 percent of students complete their remedial courses.

Of the career readiness competencies employers deemed as essential in research from the National Association of Colleges and Employers, they did not rate new graduates as proficient in many.
**GAPS ON THE HORIZON**

Automation and AI will accelerate skill shifts.

Based on McKinsey Global Institute workforce skills model
United States, all sectors, 2002–30

<table>
<thead>
<tr>
<th>Skill categories</th>
<th>Evolution in skill categories</th>
<th>Change in hours worked</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% of time</td>
<td>% difference</td>
</tr>
<tr>
<td>2002</td>
<td>2016</td>
<td>2030</td>
</tr>
<tr>
<td>Physical and manual skills</td>
<td>33</td>
<td>31</td>
</tr>
<tr>
<td>Basic cognitive skills</td>
<td>20</td>
<td>18</td>
</tr>
<tr>
<td>Higher cognitive skills</td>
<td>21</td>
<td>22</td>
</tr>
<tr>
<td>Social and emotional skills</td>
<td>17</td>
<td>18</td>
</tr>
<tr>
<td>Technological skills</td>
<td>9</td>
<td>11</td>
</tr>
</tbody>
</table>

1 Calculated using the 2004 to 2016 CAGR extrapolated to a 14-year period.

NOTE: Based on difference between hours worked per skill in 2016 and modeled hours worked in 2030. Numbers may not sum due to rounding.

SOURCE: U.S. Bureau of Labor statistics; McKinsey Global Institute workforce skills model; McKinsey Global Institute analysis

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**Top Higher Cognitive Skills**
- Growth Mindset
- Critical Thinking & Problem Solving
- Communication
- Innovation & Creativity
- Leadership

**Top Technological Skills**
- Programming
- Cloud Computing
- Business Intelligence
- AI-Related Skills
- Quantum Computing
We can prepare each student for future success through competency-based education.
What Is Competency-Based Education?
https://www.youtube.com/watch?v=JhXy-P1oYME
KnowledgeWorks’ Definition
Personalized, Competency-Based Learning

• Learner Agency
• Assessments are flexible & meaningful
• Student supports are timely & differentiated
• Competency-Based Curriculum and Progression
• Pacing and pathways vary
• Culture of Equity
• Learning targets are explicit, transparent, measurable, and transferable

Adapted from CompetencyWorks at the Aurora Institute
Utah Definition

Competency-Based Education (CBE) means a system where a student advances to higher levels of learning when the student demonstrates competency of concepts and skills regardless of time, place, or pace.
Idaho Definition

"Mastery-based education" means an education system where student progress is based on a student’s demonstration of mastery of competencies and content, not seat time or the age or grade level of the student.
<table>
<thead>
<tr>
<th>TRADITIONAL EDUCATION</th>
<th>VS</th>
<th>COMPETENCY-BASED LEARNING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students are expected to master grade level college and career ready standards.</td>
<td>LEARNING CONTINUUM</td>
<td>Students are expected to master competencies aligned to college and career ready standards with clear, transferable learning objectives.</td>
</tr>
<tr>
<td>Students advance at educator’s pace regardless of mastery or needing additional time.</td>
<td>LEARNING PACE</td>
<td>Students receive customized supports both in-school and out-of-school to ensure they stay on pace to graduate college and career ready.</td>
</tr>
<tr>
<td>TRADITIONAL EDUCATION</td>
<td>VS</td>
<td>COMPETENCY-BASED LEARNING</td>
</tr>
<tr>
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</tr>
<tr>
<td>Learning happens inside a traditional classroom, little to no accommodation of student interests or learning styles.</td>
<td><strong>SCHOOL CULTURE</strong></td>
<td>Students have a range of learning experiences at school, online, and in the community. Diverse partners create individual learning pathways to accommodate student interests and learning styles.</td>
</tr>
<tr>
<td>Every classroom has one teacher who designs and delivers instructional program with very little differentiation.</td>
<td><strong>INSTRUCTION</strong></td>
<td>Educators work collaboratively with community partners and students to develop a unique learning plan for every student based on interests, learning styles, and real-time data.</td>
</tr>
<tr>
<td>Traditional Education</td>
<td>VS</td>
<td>Competency-Based Learning</td>
</tr>
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</tr>
<tr>
<td>Assessments at set times to evaluate and classify students. One opportunity to take the summative assessment at the end of the year.</td>
<td><strong>Assessment System</strong></td>
<td>A comprehensive assessment system is an essential part of the learning system. Formative assessments guide daily instruction. Summative assessments show mastery; taken when ready and multiple chances to demonstrate mastery.</td>
</tr>
<tr>
<td>Grades are norm-referenced, reflect course standards, are typically based on weighted quarters and a final exam.</td>
<td><strong>Grading Policies</strong></td>
<td>Grades reflect the degree of mastery of competencies. If students do not earn course credit, records indicate competencies that need to be re-learned instead of the entire course.</td>
</tr>
</tbody>
</table>
What Competency-Based Education is Not
What Personalized CBE is not:

- It is not new
- It is not a checkbox of activities learners and educators must do
- It is not time based
- It is not adult centered
- It is not done without the engagement and commitment of the entire community.
Time vs. Learning

**Myth**
Deadlines are dead in a CBE model.

**Fact**
Students advance when they have demonstrated mastery, not when they’ve reached a certain birthday. However, competency education classrooms have a class pace formatively set by the teacher. There may be some learners who work ahead or a little behind pace, but the teacher understands where each student is, and when supports are needed.
PCBL & Technology

**Myth**

Students will spend all day on a computer or tablet.

**Fact**

Technology can be a great tool for learning, but it’s not the only one. Some students may prefer project-based work or a computer program, while others prefer pencil and paper. *Competency education provides students the opportunity to learn how they learn best and to demonstrate learning in a variety of ways.*
Myth

Is the role of the teacher diminished by CBE?

Fact

Relationships drive student learning in a competency-based environment. Teachers are more essential than ever before, creating unique opportunities for learning, working with students to create classroom culture, helping students discover their learning styles and working side-by-side with learners throughout the year.
Personalize for All?

**Myth**

It’s not possible to personalize instruction for all learners.

**Fact**

A learner-centered classroom doesn’t mean 25-30 individual lesson plans. It’s about developing student agency so students have a voice and opportunities to access content and their world in the best way for them. The school day includes instructional time and small group time. Because learning targets are transparent, students work with the teacher to determine what they need to accomplish and how they could show evidence of learning.
Building an Evidence Base for Competency-Based Education
Students in schools using personalized learning practices are making greater student achievement gains in math and reading over the course of two school years and students who started out behind are now catching up.
The option of extra time to finish a topic or unit and the opportunity to retake an exam or redo a final project in mathematics were associated with favorable changes in students’ self-efficacy in mathematics.
FINDINGS FROM RESEARCH

Having access to nontraditional assessments was positively associated with intrinsic motivation.

Looking Under the Hood of Competency-Based Education: The Relationship Between Competency-Based Education Practices and Students’ Learning Skills, Behaviors, and Dispositions (2016); American Institutes for Research.
43% – 47% of students who were behind their traditional grade levels completed their performance levels in three or fewer quarters, less time than it would take in a traditional education system.

Measuring student progress and teachers’ assessment of student knowledge in a competency-based education system (2017); REL Central
Students with greater exposure to proficiency-based practices* tended to demonstrate higher levels of engagement.

* Proficiency-based education in Maine is another term for CBE.
FINDINGS FROM RESEARCH

Students participating in personalized learning schools had modest gains in reading and math scores over peers in other schools and researchers found that personalized learning is “benefiting students of all ability levels.”

Informing Progress: Insights on Personalized Learning Implementation and Effects (2017); RAND Corporation
In higher education, student-centered approaches to teaching have been found to correlate with greater teacher satisfaction, less teacher burnout and student-centered instruction leads to positive student outcomes such as improved engagement and higher academic achievement.