

# Getting started with competency-based education

**To support students' academic needs and interests, educators may consider using competency-based education (CBE) strategies.**

**CBE refers to educational practices that emphasize mastering the content**, rather than receiving credit that corresponds to a specified number of hours in the classroom. CBE includes a variety of practices, but four practices are most common. Educators provide:<sup>1</sup>



**Specific and measurable learning targets.**



**Multiple opportunities** for students to demonstrate that they have met the learning target.

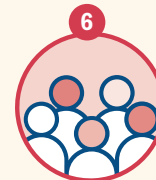
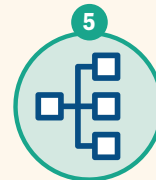


**Flexible pacing** and learning opportunities.



**Individualized support** based on each student's needs.

Although moving to CBE may seem like a significant shift from traditional instruction and assessment, **teachers and school leaders can take immediate steps to incorporate CBE practices into existing school structures.**



**This handout highlights strategies aligned to the [seven-element CompetencyWorks CBE framework](#). Teachers and leaders can implement these strategies right away in their schools.** It also includes supporting evidence for these strategies and examples of how schools and districts in one state (Minnesota) are using these strategies.

# Strategies for implementing competency-based education practices in your school

Strategies are aligned to the seven elements (bolded below) of the CompetencyWorks framework.



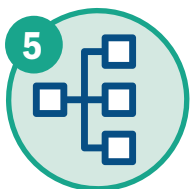
**1 Students are empowered daily to make important decisions about their learning experiences, how they will create and apply knowledge, and how they will demonstrate their learning.** Research suggests that providing students with control over their own learning can lead to increased student engagement and decisionmaking.<sup>2,3</sup> Schools can support the development of student agency in a variety of ways.<sup>4</sup> Minnesota schools and districts, including [Avalon Charter School](#) and [EdVisions Off Campus](#), allow students to share feedback on assessment methods and format via an exit survey.

**2 Students receive timely, differentiated support based on their individual learning needs.** Goal-setting is one practice for differentiating student support. Several studies indicate that goal-setting has positive outcomes for students, including higher self-efficacy, self-regulation, and intrinsic motivation.<sup>5</sup> Teachers and school leaders in some Minnesota districts, including [Farmington Area Public Schools](#) and [Spring Lake Park Schools](#), make a point to ask students about their aspirations and learning goals to help students achieve these goals.



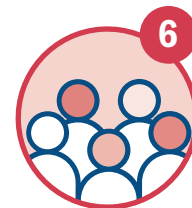
**3 Assessment is a meaningful, positive, and empowering learning experience for students that yields timely, relevant, and actionable evidence.** One analysis found that flexible assessment options are associated with increased intrinsic motivation.<sup>1</sup> To make grading meaningful and empowering, Minnesota districts, including [Robbinsdale Area Public Schools](#) and Spring Lake Park Schools, have removed zeroes, Ds, and Fs as final grade possibilities. Instead, if a student has not yet demonstrated that they know the material, teachers at these schools provide written feedback (instead of a grade) and allow the student to keep trying until they demonstrate mastery of the content.

**4 Students progress based on evidence of mastery, not seat time.** A literature review conducted by the Consortium on Chicago School Research concluded that students' mindsets can drive their behavior, perseverance, and ultimately, academic outcomes.<sup>6</sup> CBE provides students with the opportunity to master course content at their own pace. One study found that nearly half of CBE students whose performance level was below their traditional grade level were able to complete that level in three or fewer quarters, which was less time than it would have taken them to complete a traditional grade level.<sup>7</sup> Teachers and school leaders in some Minnesota schools and districts, including Robbinsdale Area Public Schools and [Willmar Area Learning Center](#), allow students to try again and progress when they demonstrate that they understand the material.



**5 Students learn actively using different pathways and varied pacing.** A districtwide study found that providing students with options for flexible pacing is associated with increases in students' motivation, self-efficacy, and understanding about why the content is useful.<sup>1</sup> Some Minnesota districts, including [Eastern Carver County Schools](#), allow students when possible to keep working on a project after an initial deadline.

**6 Strategies to ensure equity for all students are embedded in the culture, structure, and pedagogy of schools and education systems.** Building a positive school climate and supporting students' social and emotional development are important factors for improving student outcomes.<sup>8,9</sup> Developing a growth mindset is one social and emotional learning strategy that educators may consider. A growth mindset may also help to promote equity. Growth mindset is associated with improved mathematics and science achievement and may be particularly effective for supporting girls and students of color.<sup>10,11,12</sup> Educators in Spring Lake Park Schools have fully integrated growth mindset into their teaching practices. They focus on helping students extend their learning and keep working toward proficiency in a given topic.



**7 Rigorous, common expectations for learning (knowledge, skills, and dispositions) are explicit, transparent, measurable, and transferable.** To ensure students participating in CBE are equally prepared for future success as students prepared through more traditional routes, one promising practice is to align CBE assessments to learning goals and to the competencies students are trying to build.<sup>13</sup> Not sure where to start? At some schools, such as Farmington Area Public Schools, teachers and school leaders start by creating a strategic process and asking essential questions about the larger themes that will inform competencies.<sup>14</sup>

## Want to learn more about competency-based education?

Browse the following resources from Regional Educational Laboratory (REL) Midwest:



**Archived webinar:** Implementing competency-based education strategies: From research to practice



**Ask A REL response** about resources for implementing CBE practices



**Slides and CBE overview resources** from a REL Midwest training with district leaders



**Blog post** rounding up CBE resources from the REL network

## References

- 1 Haynes, E., Zeiser, K., Surr, W., Hauser, A., Clymer, L., Walston, J., Bitter, C., & Yang, R. (2016). *Looking under the hood of competency-based education: The relationship between competency-based education practices and students' learning skills, behaviors, and dispositions*. Nellie Mae Foundation. <https://www.air.org/resource/looking-under-hood-competency-based-education-relationship-between-competency-based>
- 2 Holmes, N. G., Keep, B., & Weiman, C. E. (2020). *Developing scientific decision making by structuring and supporting student agency*. *Physical Review Physics Education Research*, 16(1), 11–13. <https://eric.ed.gov/?id=EJ1243641>
- 3 Lindgren, R., & McDaniel, R. (2012). Transforming online learning through narrative and student agency. *Educational Technology & Society*, 15(4), 344–355. <https://eric.ed.gov/?id=EJ992968>
- 4 Zeiser, K., Scholz, C., & Cirks, V. (2018). *Maximizing student agency: Implementing and measuring student-centered learning practices*. American Institutes for Research. <https://eric.ed.gov/?id=ED592084>
- 5 Midwest Comprehensive Center. (2018). *Student goal setting: An evidence-based practice*. <https://www.air.org/sites/default/files/MWCC-Student-Goal-Setting-Evidence-Based-Practice-Resource-508.pdf>
- 6 Farrington, C. A., Roderick, M., Allensworth, E., Nagaoka, J., Seneca Keyes, T., Johnson, D. W., & Beechum, N. O. (2012). *Teaching adolescents to become learners: The role of noncognitive factors in academic performance*. A critical literature review. Consortium on Chicago School Research. <http://eric.ed.gov/?id=ED542543>
- 7 Brodersen, R. M., & Randel, B. (2017). *Measuring student progress and teachers' assessment of student knowledge in a competency-based education system (REL 2017–238)*. U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Central. <http://ies.ed.gov/ncee/edlabs>
- 8 Haahr, J. H., Nielsen, T. K., Hansen, M. E., & Jakobsen, S. T. (2005). *Explaining student performance: Evidence from the international PISA, TIMSS and PIRLS surveys* (p. 176). Danish Technological Institute. <https://www.oecd.org/education/school/programme-for-international-student-assessment-pisa/35920726.pdf>
- 9 Organisation for Economic Co-operation and Development. (2009). *Creating effective teaching and learning environment: First results of Teaching and Learning International Survey (TALIS)* (p. 108). <http://www.oecd.org/education/preschoolandschool/43023606.pdf>
- 10 Dweck, C. S. (2008). *Mindsets and math/science achievement*. Carnegie Corporation of New York, Institute for Advanced Study, Commission on Mathematics and Science Education. [http://www.growthmindsetmaths.com/uploads/2/3/7/7/23776169/mindset\\_and\\_math\\_science\\_achievement\\_-\\_nov\\_2013.pdf](http://www.growthmindsetmaths.com/uploads/2/3/7/7/23776169/mindset_and_math_science_achievement_-_nov_2013.pdf)
- 11 Boaler, J. (2013). Ability and mathematics: The mindset revolution that is reshaping education. *Forum*, 55(1), 143–152. <https://eric.ed.gov/?id=EJ1016613>; full text available at [http://www.youcubed.org/wp-content/uploads/14\\_Boaler\\_FORUM\\_55\\_1\\_web.pdf](http://www.youcubed.org/wp-content/uploads/14_Boaler_FORUM_55_1_web.pdf)
- 12 Regional Educational Laboratory Northwest. (2017). *Improving students' attitudes and beliefs about mathematics: A literature summary of research-based practices and strategies*. <https://ies.ed.gov/ncee/edlabs/regions/northwest/pdf/math-attitudes-training/building-positive-math-attitudes-literature-summary.pdf>
- 13 McLarty, K. L., & Gaertner, M. N. (2015). *Measuring mastery: Best practices for assessment in competency-based education*. American Enterprise Institute Series on Competency-Based Higher Education. <https://eric.ed.gov/?id=ED557614>
- 14 Sturgis, C. (2012). *The art and science of designing competencies*. CompetencyWorks Issue Brief, International Association for K-12 Online Learning. <https://aurora-institute.org/resource/the-art-and-science-of-designing-competencies/>

The REL Midwest Career Readiness Research Alliance (MCRRA) supports postsecondary preparation in Minnesota and the Midwest region. Career readiness includes providing students with meaningful opportunities to build competencies and apply their knowledge. To learn more about MCRRA, visit our [partnership page](#).

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