As you learned in Module 1, Competency-Based Education (CBE) supports students’ progression through their academic work toward proficiency and mastery—regardless of time, method, place, or pace of learning.[1] However, most schools and districts do not operate in this way.

Implementing CBE requires changes in many long-standing education structures and operations. In the classroom, instructional strategies and pacing patterns must shift to allow for student mastery of skills and concepts—even if students progress at different rates. For SEAs and LEAs, policies on earning credits, funding, assessment, and class or school structure all require significant adjustment. (You can learn more about this in Module 4.)

The graphic on the next page, from Education Elements, highlights five categories of decision points that are needed for CBE implementation[2]. This module will discuss curricular and instructional changes, as well as standards and assessment. The other three categories, which address district or state issues, will be covered in Module 4.

The practice of mastery-based learning[3] has as its cornerstone a belief that “if at first you don’t succeed, try, try again,” and a true CBE system promotes persistence and growth mindsets as fundamental principles of learning and teaching.

Not familiar with growth mindset? Click here to check out Edutopia’s 5-minute film festival on growth mindset to learn more!

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CBE systems and mastery-based learning provide ample opportunity for students to learn about persistence, resilience, and grit[4] and the seemingly intangible “something other”[5] essential to success in life.

Known as “recycling until mastery,” this does not mean doing the same thing over and over again. In fact, CBE promises to end the practice of repeatedly failing and retaining students. Difficulties or errors in learning are not embarrassments, but instead “learning opportunities” or the opportunity to gain new knowledge or skills in different ways.

For a tangible example of recycling until mastery, click the image below to watch a video about Austin’s Butterfly to learn how even the youngest students can try, take feedback on their attempt, try again, and meet success.

![Image of teacher and students]

**STOP AND CONSIDER**

What simple practices did this teacher use to help his class to critique Austin’s butterfly and understand the power of mastery? How could you incorporate these practices into your instruction?

**TIMELY AND TAILORED SUPPORTS**

CBE programs are often crafted at the outset to provide students with individualized learning opportunities, both with regard to time, place, and pace, and each student’s unique needs and interests—which may lead to greater student engagement and outcomes[6]. As all students learn at their own rates, and individual students learn differently based on what they are learning, personalization is critical. CBE is rooted in instruction that rapidly adapts based on successes and early failures and is perfectly honed to individual learning.

Because CBE and personalized learning overlap in several features, the terms occasionally cause confusion. Since “individualization” and “differentiation” are sometimes used interchangeably with “personalization,” each term is reviewed on the next page.

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Students in CBE environments clearly play a more active role in their learning than in traditional classrooms, and CBE classrooms are therefore more student- than teacher-directed. In teacher-centered classrooms, teachers typically choose what students work on and frequently provide direct, whole-class instruction; in student-centered classrooms, the teacher works with students at their level, providing the resources and supports they need for mastery. For example:

**A teacher may work with a small group of students whose assessments show they need support in the same skill area, while other students work through learning stations with tasks designed to strengthen their learning. Students benefit from individually-paced, targeted learning tasks that start from where the student is, formatively assess existing skills and knowledge and address the students’ needs and interests.**[9]

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**Individualization**

stresses pacing according to each learner’s needs and abilities, with the *instructional objective held constant across learners.* Alternative teaching strategies may be used, such as additional instruction or more detailed or scaffolded instruction.

**Differentiation**

means giving students different avenues for acquiring content, making sense of ideas, and demonstrating what they learn.[7]

**Personalization**

is paced to learning needs and tailored to student preferences about what and how to learn[8].

For more information, click on the image below to participate in a brief tutorial from www.sophia.org about how teachers can use pacing, differentiation, and personalization in their classrooms.

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Through collaboration with their teachers, students in CBE classrooms often direct their own learning, which involves the use of learning strategies such as creating graphic organizers, or self-evaluation through rubrics or tracking sheets[10]. Students who lead their own learning use several metacognitive processes[11], including:

- Understanding what learning strategies are available and which work best for them, and
- Regulating their own learning by monitoring their thinking processes, using their preferred strategies, and assessing how they prepare for and attend to tasks.

As students are able to set goals for themselves, keep track of their progress towards their goals, and reflect on their learning processes and experiences[12], research shows that they are more likely to improve their academic performance and reach their goals[13].

**USING TECHNOLOGY TO SUPPORT PERSONALIZED LEARNING**

Digital resources can be key when implementing personalized learning and emphasizing competencies. These resources increase “anywhere, anytime” access and can simultaneously differentiate instruction in real time, enhance communication and accountability, and support multiple methods of credit earning and assessment.

Digital instructional programs adapt to learners' needs by ensuring that each learner immediately receives what he or she needs (both instructionally and geared to his or her particular interest) and by providing valuable information about which techniques work better for which students and when, as well as how students are progressing[14]. In a study comparing CBE and non-CBE classrooms, teachers in CBE classrooms were more likely than their counterparts to use technology to tailor learning experiences and assessment for students and monitor their progress[15].

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In CBE, assessment provides information on progress or mastery of learning tied to some standard or objective. (For more about this, see Module 3.) Assessment in the CBE classroom can look very different from traditional tests and quizzes. Haynes et al. (2016) write that in CBE, "...students may be required to demonstrate mastery of their learning targets multiple times and in multiple ways in order to show deep or thorough understanding. However, they are given flexibility in how they do so” (p. 11). The authors found that students in CBE classrooms were less likely to have to take summative, end-of-course exams and more likely to have opportunities to spend extra time mastering content and retaking assessments when they struggled. These students also experienced a greater variety in the types of assessments they had each week, and higher expectations for them to manage their own learning to find areas for improvement[16].

At Kettle Moraine Middle School, students “received feedback, would keep practicing or learning while working more closely with the teacher, and would then submit evidence of their learning or take a reassessment... Homework is considered practice and formative work so teachers can understand student progress[17].” Sturgis (2017) described the formative assessment system in this school: “The phrases ‘failing forward,’ ‘learning from my mistakes,’ and ‘not afraid of making mistakes’ indicated a culture of learning and an understanding that mistakes open up opportunities to learn.”

[16] Ibid.
CBE requires rethinking grading policies and practices and how we inform students and others of progress towards competencies. Traditional systems of letter grades and ratings have been found to be subjective measures and convey little about what was learned[18]. Permitting grades that represent less-than-ideal knowledge (e.g., D or even C) to still be “passing” allows students to advance without full mastery. Research has shown that grades are not successful in motivating students to learn, and using grades to denote end-of-course learning (or term, unit, or class) ignores the real fact that not all students start at the same point[19]. A student using CBE explains why grades at his old school did not help him learn:

Casco Bay High School is harder than other schools, but you learn everything. You can’t pass by with a 78 and not know half the material. I used to pass by with a B-, but when I got to Casco I didn’t know half of the material I was supposed to have learned in middle school because that was the half I didn’t learn (p. 4)[20].

A competency-based system alleviates many of these issues by ensuring mastery by all learners. More information about measuring mastery and progress can be found in Module 3.

[20] Ibid.

Now it’s time to assess your competency on Module 2!

1. Which of the following does NOT describe mastery learning?
   - [ ] A. Building student tenacity and grit within the learning process.
   - [ ] B. Ensuring students do not move on until they have fully learned the content.
   - [ ] C. Giving students the same instruction repeatedly until they achieve mastery.
   - [ ] D. Encouraging students to develop a growth mindset.

2. Individualization, differentiation, and personalization all offer student choice within the learning process. (True/False)

3. Which of the following are true of assessment within CBE environments?
   - [ ] A. Assessment is flexible, with multiple and varied opportunities for students to demonstrate learning.
   - [ ] B. Students’ errors are considered learning opportunities.
   - [ ] C. Traditional letter grades are not typically used.
   - [ ] D. All of the above.

If you answered 1) C; 2) False; 3) D, you were correct! Use your growth mindset to improve your learning by revisiting the module’s content if necessary! If you have mastered this module, continue on to Module 3.