Making Mastery Accessible: A Self-Assessment Tool
Readiness for Designing and Implementing a Mastery Learning System
Competencies include explicit, measurable, transferable learning objectives that empower students.

Competencies are the foundation of a mastery learning system. When you establish competencies, you are defining the outcomes that you envision for your students. Across the country, practitioners have approached the design and development of competencies in many different ways. The questions below will help you gauge your current understanding of some of the key decision points you’ll face as you approach the work.

Choose at least three questions below, and rate yourself as a 1, 2, or 3 based on your current knowledge of the issues. Then select the top two questions that you’d like to explore further.

1= This is an area where I need to deepen my learning
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1. How would you explain the relationship between competencies and learning standards?

2. “The skill described in a competency [must be] valuable ten years from now, even if the content knowledge has changed.” How would you describe the responsibility of teachers as it relates to both competencies and content knowledge?

3. What factors should be taken into consideration when determining whether to establish competencies that are specific to an academic discipline, versus strictly “cross-cutting” competencies?

4. Many scholars and practitioners categorize competencies as “academic” (cognitive) competencies and “efficacy” (non-cognitive) competencies. How do each of these types of competencies relate to college and career readiness?

5. What is an effective approach for creating (or refining) a set of competencies for my learning community?
Reflect on the following questions:

- What is one key implication that each of the following four criteria will have on our approach to developing, or sourcing, competencies?
- How will I know when a competency meets the following four criteria?

**EXPLICIT**

**MEASURABLE**

**TRANSFERABLE**

**EMPOWERING**

With your design team, select at least one category of competencies below and analyze the different constructions of competencies using the links provided. What do you like and dislike? What do you want to know more about? How well do they meet the above criteria?

Then, take turns defending the design choices for each competency as though you were the designer, being sure to explain your rationale.

**CROSS-CURRICULAR**

- **Rhode Island**: [http://goo.gl/IPs9ZU](http://goo.gl/IPs9ZU)
- **Vermont**: [http://goo.gl/wbLMO1](http://goo.gl/wbLMO1)
- **Summit Public Schools**: [http://goo.gl/X8l9Mp](http://goo.gl/X8l9Mp)

**DISCIPLINE-SPECIFIC**

**ELA**

- **New Hampshire DOE**: [http://goo.gl/r5puCl](http://goo.gl/r5puCl)
- **Adams 50 School District, CO**: [http://goo.gl/Hc84Tq](http://goo.gl/Hc84Tq)

**MATH**

- **Great Schools Partnership**: [http://goo.gl/5Wb3zz](http://goo.gl/5Wb3zz)

**SCIENCE**

- **Asia Society**: [http://goo.gl/84veyN](http://goo.gl/84veyN)
- **UA Maker, New York City**: [http://goo.gl/PmZo4N](http://goo.gl/PmZo4N)
- **School District of Philadelphia**: [http://goo.gl/18ImNg](http://goo.gl/18ImNg)
Students receive **timely, differentiated support** based on their **individual learning needs**.

In a truly mastery-based learning system, students travel on personalized learning pathways. Individualized, “just-in-time” supports are key to helping students accelerate their learning.

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**QUICK CHECK**

Choose at least three questions below, and rate yourself as a 1, 2, or 3 based on your current knowledge of the issues. Then select the top two questions that you’d like to explore further.

1. It has been said that, in a mastery learning system, “time is variable, and learning is constant.” What does this mean, and how does it align or contrast with what you’ve observed in traditional K-12 schools?
2. Which traditionally held teacher responsibilities (e.g. lesson planning, grading, classroom management), if any, do you think might change in a truly personalized learning space?
3. In a mastery learning system, learning materials, individualized supports, and assessments should be available “just-in-time” in order to ensure students have the opportunity to recuperate and accelerate learning as rapidly as possible. What challenges and opportunities does this pose for educators?
4. What are the most effective tools and/or methods you’ve seen for capturing and using information on “individual learning needs”?
5. “Competency-based learning is a natural conclusion of a customized, user-centered system.” Based on your understanding of mastery (or competency-based) learning, to what extent do you agree or disagree, and why?
Is technology the “silver bullet” for delivering a truly personalized learning environment? Analyze the graphic below, which links specific learning configurations to Bloom’s Taxonomy. According to this model, what role does “blended learning” and a 1:1 (student-to-computer) setting play in mastery-based learning? Do you agree or disagree?

With your design team, identify a time in your own life when you have experienced your “learning edge” — a setting in which you felt both appropriately challenged and deeply engaged in your learning. Describe the setting for your team and what factors you believe helped create this environment.

Then, drawing on insights from the excerpt (left), create two mind maps — one entitled “Mindsets” and one entitled “Ecosystem” — and brainstorm a set of key strategies and/or practical steps you can take to ensure that both “necessary ingredients” exist for creating learning-edge supports for students in your school or learning community.

"There are two necessary ingredients for creating learning-edge supports in which students are continually progressing in building and applying skills. The first is a belief on the part of educators and students that learning and achieving at high levels is, in fact, possible. The second involves creating the structures, relationships, and conditions in the environment to enable that learning to happen."
Assessment is meaningful and a positive learning experience for students.

In a mastery learning system, assessment is not only a tool for evaluating learning outcomes — it is central to building meaningful, positive, and empowering learning experiences for students.

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In your own experience, what types of assessments have been the most “meaningful” and “positive” for students? How would you rate these types of assessments in terms of rigor?

In a mastery learning system, assessment is described as part of the learning experience itself; in other words, assessment as learning, not (exclusively) of learning. How would you describe what assessment as learning “looks like/feels like” from a student’s perspective?

What is the role of performance-based assessments in a mastery learning system, and what characteristics of performance-based assessments make them distinctive from other traditional assessment types?

What are the key types and quantities of assessments that students are expected to complete in their first year of college?
Analyze the graph below and review different types of performance-based assessments. What do you think are the greatest challenges and opportunities related to implementing performance-based assessments as part of your learning model? Consider teacher skills and time, student work habits, as well as tools for, and methods of, evaluating and scoring work.

Performance Tasks:
- Open-ended Writing Prompts
- Analytical and Inquiry Papers
- Labs and Research Reports
- Presentations (Oral/Written)
- Projects
- Visual and Performing Arts

Source: Adapted from Show Evidence © 2014

With your design team, analyze the design of the following three ELA rubrics. Then take turns defending the design of each of the rubrics, being sure to explain your rationale.

Retrieved from:
https://sites.google.com/a/philasd.org/competencyeducation/continua
Learning outcomes emphasize competencies that include the application and creation of knowledge, along with the development of important skills and dispositions.

Mastery-based learning is an outcomes-based approach to learning that ultimately boils down to a singular vision: college and career readiness for every student.

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What is the relationship between assessment types and learning outcomes that involve the “application and creation of knowledge”?

What research basis could you draw on to help you identify specific college and career readiness “skills and dispositions”?

Think of a “competency” required for a particular real-world profession that, when demonstrated, results in the “application and creation of knowledge.” How does this picture either contrast or align with the types of “learning outcomes” we typically see in K-12 public schools in the U.S.?

Should schools value and/or promote learning outcomes that show clear evidence of competencies, but that take place outside of the school building? What challenges and opportunities might this present?
A scan of first-year college course syllabi—from some of the most competitive institutions in the U.S., to some of the most open—showed remarkably similar types and quantities of assignments that first-year college students are expected to complete. How does this insight shape your thinking about K-12 “learning outcomes” that help prepare students for post-secondary pathways?

What is a typical workload for a freshman in college?

- 90-100 polished written pages
- 6 presentations
- 75 text-based discussions
- 21 problem sets
- 5,000 pages read
- 12 argumentative essays
- 8 examinations
- 6 lab reports

With your design team, identify three different types of assessments that represent different levels of Webb’s Depth of Knowledge (DOK) and/or Bloom’s Taxonomy of understanding.

What key skills and dispositions, if any, do these different types of assessments help to cultivate?

Evaluate each skill and disposition, and then determine whether it can be “placed” in one of the four college and career readiness domains depicted here.

Students advance upon mastery.

“Mastery and time are...at the heart of competency education.” Mastery is not only about defining the expectations for advancement within your learning system — it is about committing to a system that is dedicated to the learning, growth, and advancement of every child.

QUICK CHECK

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- What does it mean to achieve “mastery” in the real world, and how does this definition of mastery align or contrast with mastery in a K-12 school setting?

- In a mastery learning system, students advance upon mastery rather than seat-time. What are the greatest challenges and opportunities that this type of promotion principle poses?

- How will you define and measure mastery in your learning system? Does mastery mean that every student must show mastery of every skill in order to advance? Is it possible to create a system that honors both mastery and personalization?

- If you are working within a traditional district or state system, how will a mastery-based promotion policy impact decisions about the awarding of course credits and the creation of traditional course grades?

- How will you communicate about mastery with students and families who may be accustomed to a traditional system that enables students to advance with Cs and Ds, and often with significant skill gaps? What communication and engagement strategies will be important to not only building understanding, but building buy-in as well?
Many practitioners have come to define mastery in a way that not only establishes a performance level expectation for students, but that also requires students to show evidence of their skills in “multiple times and multiple contexts.” In other words, mastery is not a “one and done” performance; rather, it is the demonstrated ability to apply skill sets successfully, repeatedly, and in a variety of settings.

• How does this perspective on mastery “jive” with how mastery is perceived in the real world?

• How might this “multiple times and multiple contexts” concept of mastery relate back to preparing students for a first-year college workload?

• What types of procedures and tools will be necessary for the tracking of mastery?

Mastery-based learning calls for the “flexible use of time.” With your design teams, identify the key implications that this notion of time has on the following four elements common to teaching and learning systems.

Capture questions, ideas, or key issues that this exercise generates for you and your team.
Works Cited


