



Determining Mastery for Advancement, Promotion, and Crediting



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IDAHO MASTERY LEARNING

Determining Mastery for Advancement, Grading, and Crediting

IDAHO STATE DEPARTMENT OF EDUCATION
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Inspiration for the Guide

In 1892, The Committee of Ten, led by Harvard President Charles Eliot, created a standardized framework for the high school curriculum that, in turn, dictated essential prerequisites for college admissions. This system requires that students earn between 18 and 24 “Carnegie Units” in order to graduate. A Carnegie Unit is a standardized measure of “seat time served” in a given class — roughly 120 hours of a class over the course of a year.

Students’ grades in a particular class are supposed to represent how well they served that time, and students’ grade point average and class rank are taken as measures of how well individuals have performed compared to peers. ...

But these measures are more than a century old, and hopelessly obsolete. In this era of innovation, all students need essential skills and dispositions for work, learning, and citizenship — habits of mind and heart that cannot be measured by Carnegie Units.

Students who can take initiative, learn through trial and error, collaborate, persist, understand and solve problems through interdisciplinary approaches, and who have strong moral foundations are set up to thrive in the future. The students who are merely good at the “game of school” — those with high grades but without those skills — are not. ...

How many of us studied a foreign language for four years in high school, but graduated unable to carry on an extended conversation in that language? How many of us did well enough in high school geometry and algebra, yet struggle to use math to solve real-world problems? In the 21st century, academic content knowledge still matters, but essential skills and dispositions matter more.

—Tony Wagner, [Building A Better Transcript: What Grades Measure, And What They Don't](#)



Introduction

This document provides school districts and local education agencies guidance on implementing mastery-based approaches with respect to credits, advancement, and promotion. This guide describes a **flexible, adaptable pathway** for schools to meet the intent of the legislature by establishing a mastery-based promotion and crediting system that promotes students and awards course credit upon demonstration of mastery.

Summary of State Authority

In accordance with Idaho state board rules, schools have the opportunity to grant credit and promotion to students who demonstrate mastery as “defined and approved by the local school district or LEA.” Schools can continue to credit and promote students based on credit accumulation or seat time, but demonstrating mastery also exists as a state-sponsored option. The state has defined mastery-based education as “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.” The state has adopted the following mastery-based requirements for high school graduation:

Mastery. *Notwithstanding the credit definition of Subsection 105.01.a., a student may also achieve credits by demonstrating mastery of a subject’s content standards as defined and approved by the local school district or LEA. ([ID Admin Code 08.02.03 \(105\)](#))*

Additionally, Idaho Code, Title 33, Chapter 16, identifies mastery-based education as in the “best interest of students,” signaling a move away from the current time-based system to a mastery approach that provides students with a personalized and differentiated learning experience. The statute describes how mastery-based learning allows for students to focus on explicit and transferable skills while emphasizing competencies that integrate knowledge and skills for college and career readiness. This guide, along with the more broadly focused [Idaho Mastery Learning Staging Guide](#), is evidence of the state’s commitment to mastery learning. It provides a resource to support school districts as they develop plans to implement a “mastery-based approach to education.” Lastly, the guide also supports schools’ efforts to develop rubrics and assessments that determine mastery for the purpose of awarding credit as stipulated in the statute.

*[The State Department of Education shall] Create a sustainability plan for statewide scaling of mastery-based education and ensure that all public school districts and charter schools participating in the Idaho mastery education network develop plans that describe how the public school district or charter school will maintain a mastery-based approach to education. **Plans must include a process to develop the rubrics and assessments necessary to determine mastery and award credit.** —[Idaho Code §33-1632](#)*



Paradigm Shift

Traditionally credits have been defined as "sixty (60) hours of total instruction," commonly referred to as seat time, and credit accumulation determined promotion decisions. Mastery learning shifts the paradigm away from a seat time based credentialing system through earning passing grades in courses that meet for 60 hours. In a mastery learning system, competencies define the skills, content, and dispositions students are to master, regardless of whether mastery is demonstrated within a traditional course or through other means. Rather than seat time, mastery learning focuses on student performance and growth relative to the competencies and state standards. This guide aims to support your system as it makes the transition from instructional hours to mastery to meet the state statute requirements in credentialing and promoting through mastery.

Mastery Learning Terms

Below are terms used throughout the guide to describe Idaho mastery learning systems. Because mastery learning has verbiage that is synonymous to or shared by other educational shifts like competency-based education, the terms, for the purpose of this guide, need to be clarified. Additionally, some of the terms may be common to both mastery and traditional learning systems; the definitions below create common understanding throughout this document.

- **Mastery learning system:** A learning system based on student performance on standards and/or competencies determined by evidence of student learning as evaluated by a rating system.
- **Competency:** The knowledge, skills, and attributes to help students succeed in life and ensure they are ready for college and careers. Competencies are:
 - specific, measurable, and transferable
 - used in conjunction with content standards to design learning experiences
 - demonstrated through authentic work products and performances
- **Skill:** The specific capabilities, processes, and strategies that enable students to achieve the competencies.
- **Level:** The performance band on the pathway to mastery, decoupled from age or grade-level standards. For the Idaho State Board of Education College and Career Competencies, it is expected that some learners may be working on level 1, especially in their early years, and that, even after graduation and as adults, we will still be working on level 6.
- **Indicator:** The specific, observable behaviors described in positive, developmental student-facing language ("I can" statements) that correlate to the particular level and become more sophisticated along the progression or continuum toward mastery. Indicators are also called PERFORMANCE LEVEL DESCRIPTORS.
- **Learning Progression or Continuum:** A student-friendly skill progression with indicators describing performance level expectations, illustrating the path toward college and workforce readiness.
- **Benchmark:** Target performance level, typically aligned with grade level, for a standard or other learning outcome.
- **Present Performance Level:** The level a student has demonstrated within a learning progression for a particular competency and/or standard.
- **Target Performance Level:** The level a student is working toward within a learning progression



for a particular competency and/or standard.

- **Growth:** The ways in which students progress from one performance level to the next performance level on the competencies.
- **Rubrics:** Rubrics are derived from the learning progressions and can be used as part of your rating system to provide students feedback on their learning, as well as monitor student progress toward mastery on the competencies and/or standards.
- **Scoring:** Determining the performance level of a piece of student work or other evidence of learning.
- **Grading:** Evaluating cumulative performance over a period of time.
- **Grade:** A course or content-area final “mark” based on progress toward mastery at a point in time.
- **Feedback:** Providing students with information based on demonstrated work evidence about their present performance level and their target performance level with next steps for learning.
- **Advancement:** Moving students to more sophisticated tasks to demonstrate the next target performance level/benchmark in the learning progression or continuum.
- **Reporting:** Communicating student progress toward mastery, including progress/interim reports, report cards, and transcripts.
- **Reporting Period:** The window of time for the reported performance level or grade; traditionally school districts mandate reporting at set intervals (e.g., trimesters, quarters), though in a mastery learning system the interval could be asynchronous depending on individual student progress to a benchmark.
- **Promotion:** Advancement to the next grade level or course upon mastery in the previous grade level or course.

Transition Process

Transitioning to new policies and systems for advancement, promotion, and crediting under a mastery learning system will take time and planning. As you develop your plan, you'll need to consider:

- **Grading and promotion are deeply embedded in our educational culture.** Movement away from the traditional learning system most stakeholders know has the potential for pushback and resistance. Beneath its surface, grading—in its broadest sense—speaks to stakeholders' conceptions of fairness, motivation (e.g., grades as carrot and stick), competition, hierarchy of different content areas, and many other messy ideas. However, challenging the assumptions that underlie the policies and practices is necessary to developing equitable, accurate, and agency building systems.
- **Communication with stakeholders is vitally important, no matter how large or small you imagine the changes to your system will be.** Communicate early and often, sharing information and seeking input. Begin by determining your key messages to explain your district's transition to mastery-based promotion and crediting. Parents, students, educators, and community members will need a common understanding of your district's vision and purpose for this transition.



- **The decisions you make when transitioning to a mastery learning system are interconnected and have the potential for wide impact.** One set of decisions affects another set of decisions as you map a strategic plan. For example, a transition to mastery creates questions about how your system will determine whether a student has achieved mastery. Will one demonstration of mastery be sufficient, or will a student have to demonstrate mastery of the same competency several times in various contexts? This question then invites thinking about how to ensure students have access to the required opportunities to demonstrate mastery—and if organizing competencies and content into traditional courses or some other configuration is most effective to meet student needs. Any changes made to awarding credits and granting promotion will implicate course and grade-level planning, curriculum and assessment design, and grading. Taking time to think through the decisions examined in this guide will support you in developing a strategic plan that will evolve through the iterations in your school district’s mastery learning journey.
- **Consider how far and how much you want or can change.** Can your school district change course or grade-level structures, and over what period of time? What resources and tools will you need for the restructuring and are those available to your district? What pedagogical training will your educators need to undertake this transition? Once you develop your plan, it will be important to think about what your district’s needs will be and how much change can happen within the confines of your district’s various learning environments while considering the time it will take to make this transition.
- **The transition to crediting by mastery, even if not part of a larger mastery learning, is an iterative, multiyear process.** Systems rarely have the capacity to make multiple large-scale structural shifts in a single year, so plan to identify and leverage key changes. For example, if you want to transition from a traditional learning system to an asynchronous, personalized system where each student moves through the learning progression of the competencies on their own, it might be difficult to make that transition happen in one year. It may take multiple years to move your district’s schools from traditional learning to competency-aligned learning with time-bound courses and grade levels and then even more time to move to non-course/non-grade-level asynchronous, personalized learning. This transition will take time as it requires many decisions as well as resources to make it a smooth transition for all stakeholders. Consider where you are starting and make a series of transitions over multiple years versus many transitions all at once. For example, if you are just starting to integrate mastery, consider creating mastery-aligned assessments with rubrics and spend time honing that work before starting on the next step in your strategic plan.



Preview of the Guide

The guide focuses on the process of developing a plan for defining and determining credit while also addressing needed tools and resources like rubrics and assessments. Each section focuses on key decisions to make when developing your district's strategic plan. However, as mentioned previously, every decision within the system affects other decisions. Though the process may appear linear, it is iterative; as a natural part of the process you may find yourself revisiting previous decisions as you develop your plan. Additionally, communicating student progress or reporting on grades and promotion are discussed last, as that is the final series of decisions you will make when designing your mastery learning system.

- **Section 1 - Defining Mastery in Your System: Outcomes and Evidence** focuses on the first set of decisions to define learning outcomes and the required evidence to determine mastery in your learning system. The decisions in determining learning outcomes include identifying the learning goals, learning progression, and benchmarks for progress. Following the outcomes, determine decisions regarding the evidence of learning needed to meet those outcomes.
- **Section 2 - Determining Student Mastery in Your System** focuses on the second set of decisions to determine how much evidence students need to provide to demonstrate they have met a given target performance level and how you will organize those opportunities to demonstrate mastery. Your school district will have to determine the number of student performances needed to determine mastery. Additionally, you will decide how to organize the opportunities to demonstrate evidence of learning, which can range from more traditional methods of grade levels and courses all the way to student-designed or personalized learning opportunities.
- **Section 3 - Reporting on Student Progress: Scoring, Grades, Promotion, and Crediting** focuses on how to make decisions related to reporting student learning in your mastery learning system. Decisions to consider will include scoring work, converting those scores into grades, reporting on work or study habits, and then finally, crediting and promotion.



Section 1 - Defining Mastery in Your System: Outcomes and Evidence

Your system may be well on its way to fully implementing mastery learning, and thus well-positioned to make the transition to awarding credit and promotion upon demonstrated mastery. On the other hand, your system may be new to mastery and, as a result, cause concern that it is not equipped to make the change. Most systems are somewhere in between. Regardless of where your system lies on the continuum, the first step to develop a plan for creating the rubrics and assessments necessary to determine mastery and award credit is to take stock of what is already in place.

A system has to *define* mastery before it can *determine* mastery. This can be a head-spinning semantic nightmare, largely because the word *mastery* carries so much weight and because educators have, by and large, been trained to think about awarding credit or granting promotion in terms of percentages and letter grades. The question "What is mastery?" can lead educators down a myriad of unproductive paths and so it is best to be as simple and straightforward as possible by moving slowly and avoiding jargon.

This begins by clarifying the difference between *defining* mastery and *determining* mastery.

Defining mastery is envisioning the performance of an instructional objective. Defining mastery begins by imagining and then describing a successful performance of the competency or standard. For some objectives, mastery might be defined as a simple performance. For example, if the learning objective is "*Recite the Pledge of Allegiance*,"¹ envisioning and describing mastery is fairly straightforward, because the outcome is not cognitively complex, falling low on Bloom's Taxonomy or Webb's Depth of Knowledge. For more complex objectives, such as "*Critical Thinking/Problem-solving: Design and test solutions*" or "*Teamwork/Collaboration: Contribute to team roles and responsibilities*"² envisioning and describing mastery is more complicated, but the process is the same. Educators use all sorts of tools to capture the mental image of a successful performance and communicate it to students and parents, including anchor papers, exemplars, and rubrics.

The examples also help make clear that defining mastery as a cutoff score on an objective assessment is insufficient. A definition of mastery should pass the "watch me" test³: Can you watch a student score a 70% on a quiz about the Pledge of Allegiance? Not really. Can you watch a student recite the Pledge of Allegiance? Absolutely. The same guideline applies to the competencies, even though the performance you imagine may be more complex or encompass an array of demonstrations.

¹ K.SS.4.2.2 in the Idaho Content Standards: Social Studies

² Draft Critical Thinking/Creative Problem Solving and Teamwork/Collaboration Competency Skills, Idaho Mastery Education Network

³ Mager, R. (1984). *Preparing Instructional Objectives, Revised*.



Determining mastery is collecting enough evidence about an individual student's learning. Though the next section will go into more detail, determining mastery is essentially establishing how much evidence or how many successful performances of a task are sufficient to say, "This student has mastered this task."

Think, for a moment, about a sports team. Geno Auriemma, head coach of the University of Connecticut women's basketball team once said, "Some teams practice *until they get it right*. We practice *until we can't get it wrong*." For our purposes, "getting it right" is how Auriemma defines mastery—it is his **image of a successful performance** on the court. He determines his team has achieved mastery when they "can't get it wrong"—that is, when they can **repeatedly and consistently perform** at the defined level of mastery.

This section focuses on the former, not the latter.

To define mastery in your system, you will first identify the infrastructure you already have in place by asking three questions:

- **How do we describe what students should know, be able to do, and be like?**
This is the *what* of mastery. From the statewide **standards** and system-wide **competencies**, down to individual lesson learning targets, these aims or objectives establish the skills, knowledge, and dispositions students should have when the learning experience is complete.
- **How do we know what is developmentally appropriate?**
This is the *performance level* of mastery. In the context of the state standards, these are called **benchmarks** and are typically tied to grade levels. In competency-based systems, the **performance levels** are described by the learning continuum and are uncoupled from grade levels, making them more fluid and flexible.
- **How do we know what students know, can do, and are like?**
This is the *evidence* of student learning. It can range from **objective assessments** to complex **performance assessments** in authentic contexts. It includes tasks with low cognitive demand as well as those that require higher-order thinking.

Responses to those questions can typically be organized into two broad categories: those that describe traditional systems and those that describe competency-based mastery learning systems. The elements of both systems are presented below and, as you review the table, bear in mind that "traditional" is not a precise descriptor, as we use it here mainly to differentiate between systems that are competency-based and those that are not. Traditional systems, as well as those moving toward becoming competency-based, may have elements from both columns.



Defining Mastery to Award Credit: BASIC INFRASTRUCTURE		
TAKING STOCK QUESTIONS	TRADITIONAL SYSTEMS USE	MASTERY LEARNING SYSTEMS ADD
How do we describe what we want students to know, be able to do, and be like?	STANDARDS: Mix of higher-level and lower-level measurable skills and knowledge	COMPETENCIES: High-level, explicit, measurable, transferable, and empowering skills and dispositions
How do we know what is developmentally appropriate?	BENCHMARKS: Instructional sequence of skills and knowledge by grade levels; each benchmark does not necessarily build upon the one that came before	LEARNING PROGRESSION/CONTINUUM: Representation of how students typically learn, develop more sophisticated understanding over time; levels may roughly correspond to grade levels but more often span multiple years
How do we know what students know, can do, and are like?	MIXED ASSESSMENTS: Evidence of achievement of outcomes; may include lower-level to higher-level thinking and depth of knowledge	PERFORMANCE-BASED ASSESSMENT: Evidence of progress toward the competency at the highest level and place on the learning progression/continuum; focus on higher-level thinking and higher depth of knowledge

Taken together, these three elements define mastery by describing what it looks like when students *get it right*. The Idaho Content Standards and the [State Board of Education College and Career Readiness Competencies](#) address the first two questions, defining what students should know and when they should know it. While the standards are organized by grade level, the competencies purposely avoid this structure. Instead, the competencies are organized into six levels, which are not intended to represent grade levels spans per se, though while transitioning to a mastery learning system it can be useful to think of them in that way:

LEVEL 1	PK-2
LEVEL 2	2-4
LEVEL 3	4-6
LEVEL 4	6-9
LEVEL 5	9-11
LEVEL 6	11-12 and beyond



During a school's initial implementation of SBOE College and Career Readiness Competencies, ramping up the new expectations for learning may make sense. For the first four years, **Level 5** can be used as the benchmark for mastery by high school graduation. This allows both students and teachers to reach a high level of competency, without placing undue consequences on students while they, teachers, and leaders transition to a mastery learning system. As schools and districts successfully transition, striving for students to achieve **Level 6** for high school graduation is an option.

Decisions about the types of assessments to use, as well as their specific design, are made by systems and schools. To prepare students for postsecondary experiences, as well as to assess high-level performances of the standards and competencies, the assessments should reflect the work expected in both college and the workplace. Such assessments include, but are not limited to:

- Argumentative Writing
- Debate
- Document-Based Question
- Engineering Design
- Infographic
- Informative Writing
- Lab Report
- Mathematical Generalizing
- Mathematical Modeling
- Multimedia Presentation
- Narrative Writing
- Photo Essay
- Planning an Event
- Reflective Summary
- Research Project
- Socratic Seminar
- Speech
- Text Annotation

Format alone does not determine rigor. The State Department of Education has [sample performance assessments](#) for leaders and teachers to build their capacity to develop rigorous opportunities for students to develop and demonstrate mastery at all levels. If a system or school finds that it cannot answer the questions above to their satisfaction, then adopting the SBOE College and Career Readiness Competencies (and Idaho Content Standards) is the first step. Developing assessments is the second step, where the real work begins. Systems and schools wishing to do a deeper dive into competency-aligned curriculum and assessment will find the [Idaho Mastery Learning Staging Guide](#) invaluable. It includes numerous resources, including a self-assessment and planning tools to launch the work.

Potential Pitfalls

- **Build the vision even if it will take time to get there.** If you don't have performance assessments, take the time to build the capacity to develop them. Be sure to make explicit the connection between performance assessment and the overall move toward mastery learning.
- **Ensure alignment of the pieces already in place.** Lots of assessments (and other resources) claim to be standards-aligned, but the quality of alignment and the cognitive complexity varies widely.
- **Competencies and the existing assessments (and curriculum) were never intended to align.** Systems and schools often try to put a new coat of paint, in the form of the competencies, on old materials. Some will require small tweaks, some will need significant revision, and some will need to be abandoned. Build capacity to know the difference and to undertake the work.



Section 2 - Determining Student Mastery in Your System

Once your system has defined mastery, the next step is deciding how much evidence you will collect—that is, how many student performances will it take—to be confident that a student has met a given learning objective at the specified performance level. To return to the examples above, if the learning outcome is low-level, like *"Recite the Pledge of Allegiance,"* one or two demonstrations of the objective may be sufficient to determine mastery. For the more complex learning outcome, *"Build collaborative relationships, work effectively within a team structure, and negotiate and manage conflict,"* multiple performances are necessary to see that a student has truly met this outcome. As a general rule, the number (and complexity) of performances necessary to determine mastery are directly proportional to the complexity of the learning outcome.

Quantity of Student Performances

Once your district has defined mastery by deciding what high-quality evidence of learning aligns to your student outcomes, the next set of decisions is about the quantity of student performances needed to determine mastery. How many times must a student repeatedly and consistently perform at the defined level of mastery? For example, decisions need to be made around one piece of evidence at a target level on the learning progression or continuum, or multiple pieces of evidence required at a target level on the learning progression. When making this decision about quantity, consider the following:

- **Grain size matters.** Some objectives, such as those described under the standards and goals of the Idaho Content Standards are fine grained, especially at the lower grade levels. Other objectives, like the State Board of Education College and Career Readiness Competencies, are much broader and include multiple transferable skills. Fine-grained objectives may only necessitate students show evidence of mastery once. On the other hand, as students move through the learning progressions of each competency, each is more demanding. The advanced skills that are described in levels 5 and 6 of each competency's performance indicators or skills, for example, may require multiple performances of learning from different content disciplines to show consistent student mastery of those advanced skills.
- **Complexity matters, too.** The quantity of evidence should also consider the complexity of the tasks themselves. Only cognitively complex tasks allow students to demonstrate high-level outcomes, so ensure that tasks are rigorous enough for students to demonstrate mastery within the number of opportunities they are given.

Organization of Opportunities to Demonstrate Evidence of Learning

An exciting facet of planning a district's mastery learning system is the opportunity for schools to design and organize the student demonstrations of mastery—and the learning opportunities that precede them. When standards are the driver of this process, the focus is typically on *curriculum*, the learning opportunities students will access to acquire the content skills and knowledge. As noted above, standards don't necessarily reflect how skills and understandings develop over time, so organizing around them can make curriculum and learning feel fragmented and disjointed.



Competencies present an opportunity to move away from this structure. By emphasizing the demonstration of cross-disciplinary skills and dispositions, they support an organization that is more authentic and more robust. One powerful way to begin thinking about organizing learning and demonstrations of learning is to consider how the acquisition of content knowledge and content-specific skills of the standards are deepened by the competencies. For example, the [State Board of Education College and Career Readiness Competencies](#) include [Citizenship/Civic Responsibility](#). A standards-oriented approach would likely relegate this to the social studies curriculum. A competency-oriented approach looks for opportunities to create authentic demonstrations and learning, and so asks questions like, "What would it look like if students worked to demonstrate mastery of the science standards while also working to demonstrate civic responsibility? What other content standards, such as in mathematics, health, or ELA, might be incorporated?" These questions could lead to products such as student-developed and implemented plans for community water testing, raising awareness of the impact of stress on health, or a public discussion of the history and ethics of patenting genes. Working backward from the evidence of student learning, designers can then organize the learning experiences that lead to those outcomes.

While robust and rigorous student work like this can, and does, happen in standards-oriented systems, building around the competencies emphasizes the centrality of these transferable skills and makes clear to everyone their importance. Teachers are empowered to explicitly teach these skills, rather than focusing on meeting the content standards alone. Students benefit because they experience the skills as truly cross-disciplinary, developing and demonstrating them through authentic work.

A competency-oriented approach also ensures that students have multiple opportunities to develop and demonstrate the competencies. While one piece of evidence might suffice to demonstrate a fine-grained standard, demonstrating mastery of competencies requires multiple opportunities. For example, a curriculum that includes performance-based assessments to develop and demonstrate mastery could include assessments that evaluate the same competencies more than once. Students can hit a target level of mastery on a unit's culminating performance assessment while having more opportunities to show mastery on those same assessed competencies in future assessments.

The way systems organize the opportunities for students to acquire and demonstrate mastery, and earn credit, fall along a continuum, with traditional time- and age-based models on one end and flexible, highly personalized models on the other. Below are some common models, followed by examples of systems that incorporate one or more innovative approaches.

Grade levels or age-based cohorts are currently the most widely-used method of organizing learning. In a mastery learning system, you can still have a time-bound grade-level organization but the promotion from one grade to the next will be based on students progressing based on mastery of the standards for that grade level and the learning progression performance levels of the competencies can be crosswalked to grade levels. For example, performing at Level 1 of one or more of the competencies could be required for promotion from grade 1 to grade 2. Alternately, advancement could require



meeting a growth target on the learning progression. Retaining a time-bound grade-level structure comes with tradeoffs, however, as their lack of flexibility makes it difficult for students to work asynchronously or at a pace that meets their individual needs as learners.

Content-based courses are the chief method of organization in secondary schools, with separate content classes as the school model. In this context, students can earn credit by demonstrating mastery, as described above, on a predefined set of content standards. Systems using competencies can require students to demonstrate mastery or growth with respect to one or more of the competencies. Each course would include its own learning goals and specify the number of performances students must complete in order to receive credit for that individual course. If organizing by courses, systems should map the learning goals across all the courses to ensure that students have opportunities to demonstrate all the learning goals across the content classes.

Mini-courses move away from one-size-fits-all courses and grade-level structures toward a flexible approach by creating opportunities for student voice and choice as they engage in deep dives into a limited number of standards and competencies. Mini-courses, or “studios” as they are sometimes called, can be designed around a specific set of content standards, allowing students to decide which competencies they will demonstrate, or around a specific set of competencies, allowing them to choose the content standards to demonstrate. Credit is awarded based on the work portfolio produced showing evidence of mastery of the identified competencies or standards. For example, a content-driven studio might focus on the experiences and roles of indigenous peoples in the United States, meeting a set of benchmarks for United States History (USH).⁴ In this studio, students would choose which competencies they would demonstrate, such as *Knowledge of Core Subjects and Oral/Written Communications*, producing work that was evidence of both the standards and the competencies, like an informative photo essay or a research argument paper. On the other hand, a competency-driven studio would focus on a specific demonstration, such as a speech, a community service project, or engineering design prototype, with students choosing the specific content standards they would demonstrate. One student might deliver a speech about Native American culture to meet history standards, while another meets biology standards with a presentation about biodiversity. In either case, credits (or portions of credits) are earned when students have demonstrated the learning outcomes or goals for that mini-course or studio.

⁴ 6-12.USH.1.1.3, 6-12.USH.1.2.3, 6-12.USH.1.3.1, 6-12.USH.1.3.2, 6-12.USH.1.3.3 in the Idaho Content Standards: Social Studies



Collaborative learning groups, like mini-courses, provide students voice and choice in the combination and configuration of standards, competencies, and evidence of learning to demonstrate mastery. Students come together based on interests or needs to work in collaborative groups to build and demonstrate mastery of a common set of standards or competencies. Educators facilitate learning experiences and curate resources to personalize for both the group and individuals in the group.

Independent learning opportunities represent the ultimate in personalization. Students collaborate with educators to design their own learning opportunities to move them from their present performance level to the next. Using these learning goals, students and educators design learning experiences. As with the model above, educators would serve as facilitators and collaborators of learning as students create their own learning experiences and performances to demonstrate mastery.

Secondary schedules often feel most challenging to reenvision from the Carnegie course structure. These six high schools (four district and charter models and two private school models) push the boundaries of the traditional, annualized Carnegie credit system. East Harlem Scholars Academy has grade-based courses, while all of the other programs have multi-age classes, some of which have prerequisites.

<p><u>BRONX ARENA HS</u> <i>FOCUS: Master core content and competencies + essential college/career tasks</i></p>	<p><u>WILLIAM SMITH HS</u> <i>FOCUS: Explore interests, core content, and master essential skills</i></p>	<p><u>EAST HARLEM SCHOLARS ACADEMY</u> <i>FOCUS: Master core content & skills + essential college/career tasks</i></p>
<p>Combination of sequential and non-sequential short competency-based courses: aligned to the NY State Graduation Requirements + Exams.</p>	<p>2-, 4- & 6-week non-sequential projects (interdisciplinary and single discipline). Teachers and students put forth project ideas, which then become the offered courses.</p>	<p>Annualized courses that follow NY State recommendations, but courses are organized around culturally relevant projects with links to the local East Harlem community. EHSA is not competency-based, but courses are organized around building-block skills.</p>
<p><u>Bronx Arena Scope & Sequence</u> <u>Bronx Arena Competency Rubrics</u></p>	<p><u>Learning Differently</u></p>	



<p><u>URBAN ACADEMY LAB SCHOOL</u> <i>FOCUS: Explore interests + core content, become proficient in essential college/career tasks</i></p>	<p><u>NuVu STUDIO</u> <i>FOCUS: Become an original designer and master competencies</i></p>	<p><u>CAMBRIDGE SCHOOL OF WESTON</u> <i>FOCUS: Explore interests, master core content + essential college/career tasks</i></p>
<p>10-week-long (mostly) thematic courses that focus on a single, complex topic or set of ideas, and demonstrate competency through projects. Flexible scope, with choices. Lightly sequenced by using a prerequisite system.</p>	<p>2-3-week-long studios that focus on a single complex, interdisciplinary topic. No set sequence, no set scope, no set curriculum. Studio topics are informed by competencies + critical real-world issues.</p>	<p>Topical and thematic courses, both interdisciplinary and single discipline: each course lasts 6 weeks (students take 3 courses /session: 18 courses/year). Some set sequencing, some required scope, and lots of choices to achieve the required scope.</p>
<p><u>Sample Course Syllabi</u> <u>Graduation Requirements</u></p>	<p><u>Studios that Delve into Topics</u></p>	<p><u>History Offerings</u>; <u>Science Offerings</u>; <u>Social Justice Offerings</u></p>

When implementing promotion and crediting upon mastery, developing a plan for how students will undertake standard, competency, and credit recovery is vital. A key benefit of mastery learning is that students no longer need to repeat a grade or retake an entire course, but instead can work toward demonstrating mastery of only the outcomes they did not meet. Of course, timely interventions delivered before a student "fails" is the best option. But when that is not enough, systems should have an array of options available so that educators, students, and family can collaborate to determine how to move the student toward mastery. Options include time built into the school day, extended hours, and asynchronous learning opportunities.

As you start to think about how you want to create and organize opportunities for learning performances in your mastery learning system, this will be a time to consider your resources and strategic plan. How much will you need to transition in your school models based on where schools are starting? How much time will the transition take? What resources do you have to make revisions or pivots to your current learning opportunity structure? What training will your educators need within your school district to make this transition? How will you roll out your plan for transition to students, parents, and educators?



Potential Pitfalls

- **Misalignment among the quantity of student performances, the organization of the learning opportunities, the learning outcomes and evidence of learning**
For example, the benchmarks for progress explaining how and when the learning goals should be met must align with the organization of the learning opportunities. Don't establish grade-level benchmarks if you plan to move toward an asynchronous, personalized learning system with no grade-level promotion. Another misstep would be to use teacher-designed assessments for evidence of mastery while having students design their own learning experiences, since the potential for misalignment between the two is too great.
- **Too much change too soon**
Gather input and consider the needs of all the stakeholders when designing the process for determining mastery. It may not be feasible to move away from course and grade-level structures in your school district and move into highly flexible, personalized learning opportunities.
- **Low-level outcomes and low-level assessments of mastery**
Outcomes and performances place a cap on student learning. Ensure that the system is built around high-level tasks that allow students to demonstrate high-level outcomes.
- **Stakeholders' assumptions about what learning experiences should look like**
Are there instructional expectations concerning the ways in which students should be learning that will need to be addressed from the perspectives of educators, parents, and students? Depending on how you decide to organize your learning experiences, they might be new to the various stakeholders in your district. Ensuring there is detailed communication about the revisions or changes to learning experiences with all stakeholders will be important.



3 - Reporting on Student Progress: Scoring, Grades, Promotion, and Crediting

Shifting to mastery-based promotion and crediting brings with it the opportunity to examine a system's policies and practices related to grading and reporting. When mastery has been defined and systems put in place to determine student mastery, the next step is to decide how to clearly communicate student progress to all stakeholders, including students and parents. Districts and schools that use mastery learning have to decide what information is useful for stakeholders and develop an effective way to share that information. When thinking about transitions or revisions to reporting for mastery learning consider:

- *Effective reporting considers both purpose and audience.*
- *Formats for reporting should be tailored to the needs of the audience and clearly communicate purpose, including how the information should be used.*
- *Consider how often reporting should be done to communicate effectively with all stakeholders.*

Review the exemplar progress reports, report cards, transcripts, and other reporting artifacts below and consider the following questions. These questions are the same ones your district will need to consider as you create your own reporting policies and structures for mastery learning.

- Who is the audience?
- What is the purpose of the document? Is it clearly communicated?
- What information is included?
- Does the information meet the purpose? Does it meet the needs of the audience?
- What reporting elements could be adopted or adapted to meet your purpose and the needs of your audience?

Sample Reporting Instrument		Features to Note	
<p>Building 21 Progress Report</p>		<ul style="list-style-type: none"> ● Reports progress along Building 21's competency continua, which include "habits of work" and academic outcomes ● Shows progress toward completing content area portfolios ● Organized by competencies, rather than by classes or skills ● Includes grades for product, process, and progress ● Narrative explanations add some detail and identify next steps, though they are not completely personalized ● Color-coding helps manage complexity and call attention to areas of concern ● Grain size provides an overview, rather than drilling down in fine detail 	



South Carolina Prototype Progress Report

Competencies	My Progress	
Investigating Through Inquiry	LEVEL 1	LEVEL 2
	3/12/18	5/16/18
Reasoning Quantitatively	LEVEL 1	LEVEL 2
	4/19/18	Most All
Using Sources	LEVEL 1	LEVEL 2
	2/12/18	All Some Most All
Sustaining Wellness	LEVEL 1	LEVEL 2
	All	Some Most All

- Reports progress toward mastering competencies using the state's [competency continua](#)
- Graphically represents progress, making the information concise and easy to interpret
- Progress is reported by competency, not class, content area, or specific skill

Coppell (Texas) Independent School District Standards Based Report Card

Future Ready	Report Period			
Foundations	1	2	3	4
Uses creative thinking to construct knowledge and develop digital products				
Collaborates using digital tools				
Acquires and evaluates digital content				
Demonstrates knowledge of technology by using digital tools responsibly				
Use comprehension skills to analyze how various forms of media impact meaning				
Can locate a range of relevant sources, evaluate and present ideas and information				
Language & Literacy	Report Period			
Reading	1	2	3	4
Recognize features of words spoken or printed				
Understands the sound structures of language				
Uses sounds & spelling patterns to decode written language				
Recognizes high frequency words: 1 st (20) 2 nd (50) 3 rd (75) 4 th (100)				
Comprehends a variety of text drawing on useful strategies as needed				
Reads grade level text with fluency and comprehension				
Reads on target level: 1 st 9wks: 2 nd 9wks: 3 rd 9wks: 4 th 9wks:				
Determines the meaning of new words then uses them when reading and writing				
Explicit and make connections to literary text				
Explicit and make connections to informational text				
Reads independently for sustained periods				
Knows when and how to apply a flexible range of reading strategies				
Writing				
Uses elements of the writing process to compose text				
Writes literary texts to express feelings and ideas				
Writes expository texts to communicate ideas				
Conventions				
Understands and uses correct functions of grammar when speaking and writing				
Writes legibly and uses appropriate capitalization and punctuation				
Uses sounds, spelling patterns, and high frequency words to approximate correct spelling				

- Uses a simple scale (not pictured) to report on standards: Met Standards, Approaching Standards, Insufficient Progress on Standards, Not Assessed
- Reports on individual skills organized by content or standard area
- Shows growth over four reporting periods
- Grain size reflects a standards-based, fine-grained approach rather than a competency-based, coarse-grained approach

Prototype Competency Report Card

Using sources: I can engage with diverse sources of information, understanding ways to select, contextualize, and use resources responsibly, while attending to their limitations.	3	4	5	Most Recent Level Demonstrated	Highest Level Demonstrated	Next Steps
Select relevant sources	3	2	4	5		
Contextualize sources	4		4	4		
Use systems to organize information gathered		3	5	5		
Synthesize multiple sources						
Reading Critically: I can read and critique diverse forms of media (e.g., texts, films, advertising, music).	3	4	5	Highest Level Demonstrated	How many times?	Next Steps
Choose and apply strategies						
Evaluating the main ideas or themes						
Analyze tone, point of view, and purpose						
Analyzing craft						

- Reports progress on individual skills along the competency continua
- Shows mode, last in, and highest level of performance
- Doesn't reflect growth over time
- Grain size strikes a balance between competency-based and standards-based reporting



Scoring Student Work

Determining how you will score individual performances of learning will be the first set of decisions your district makes about reporting student progress and performance. First, though, it is important to distinguish between *scoring* and *grading*. **Scoring** is determining the performance level of a piece of student work or other evidence of learning. **Grading** is *evaluating cumulative performance over a period of time*.

Scores communicate a student's present level of performance on standards, competencies, or subskills within a competency as demonstrated by a single piece of work. The first set of decisions about scoring include what gets scored and what scale will be used for scoring. It is important to make these kinds of decisions as a district because even though the results of the decisions will play out in individual classrooms, it will be important for fairness and high expectations to have consistency for all stakeholders involved. Having a district plan that includes "a process to develop the rubrics and assessments necessary to determine mastery and award credit." (Idaho Code §33-1632) is also one of the state board policy requirements.

System- or school-wide consistency in scoring—and ultimately, grading—relies on having commonly understood answers to key questions:

- **What gets scored?** Is all work scored, or only the evidence used to determine mastery? Formative assessments or practice for summative assessments can be scored to provide feedback to support student learning. Student work habits may also be scored though they should be separated from scoring of the standards and competencies. Student work habits can be scored on their own performance level progression, which should be separate from the scoring of evidence for academic competencies (e.g., the score on a student's lab report should be based on the science standards and inquiry competency, not on whether it was turned in on time). When talking about mastery learning, scoring is always the process of evaluating an individual performance to determine a student's present level of performance based on the learning progression.
- **What scale is used?** It will be important to have a scoring scale that is similar from school to school within your district so that reporting on mastery is consistent across the district. Creating scoring scales based on the learning progression and performance levels within the Idaho state competency map is recommended. Depending on your mastery learning system design, your grading scale may need to include performance-based ratings and/or grading conversions if numerical or letter grading will still be used in your district. For example, if a unit's summative assessment ends with a performance-based assessment, then maybe your district has adopted scoring scales that are created directly from the performance levels and learning progression. However, maybe you are still using letter grades; your scoring scale will need to have grade conversions for the various performance levels featured on your scoring scale.



- **How do rubrics play a role in scoring?** Rubrics play a vital role when scoring student work as they provide a bridge between the scoring scale and the standards and competencies being evaluated. Rubrics can incorporate the language and the performance levels from the learning progression or continuum itself. Rubrics support educators in scoring any piece of student learning and can be used as the scoring scale itself. Rubrics can also support educators in collaborative scoring of student work in order to norm assessment practices, which can result in more uniform evaluation of student learning across the school district. Rubrics can also support students in knowing the expectations for demonstrating the competency.

Grades

Considering the concept of “grades” is the second step in figuring out how to certify mastery in your learning system. Grades communicate a student’s present level of performance demonstrated by multiple pieces of evidence over time. Grades are composed of multiple scores and are usually considered within the context of a subject area, grade level, or course but can be assigned in other ways depending on how a system has chosen to organize the learning experiences for students within your mastery learning system. For example, grades can include a final “mark” for a competency or standard as determined by multiple pieces of evidence submitted for mastery evaluation of that objective.

The first set of decisions about grades begins with what scores get included in the grade and how the scores are calculated for a grade. Deciding your purpose for grading is your district’s first priority. Here are some overarching questions to consider when thinking about grades in your mastery learning system:

- What is the purpose for your grading system?
- How are you communicating the purpose for grading to all the stakeholders?
- What will consistent grading practices look like across your district?

Once you have considered these questions, you can move on to more nuanced questions, including:

- **What gets a grade?** Another way to phrase this question is “What evidence counts and how are you rating that evidence?” Researchers have identified nearly two dozen major sources of evidence used by teachers to calculate grades, including both student products (e.g., exams, class work, oral presentations) and student behaviors (homework completion, class participation, effort, and attitude)⁵. To unravel the factors contributing to grades, evidence of learning can be sorted into three broad categories: *product*, *process*, and *progress*. In a mastery learning environment, products are the summative assessments that measure where on the continua a student stands relative to the competency, reflecting *what* a student has learned. Process criteria address effort, work habits, homework completion, and formative

⁵ Guskey, T. R. & Brookhart, S. M. (2019). *What We Know about Grading: What Works, What Doesn't, and What's Next*. ASCD.



assessments—in general, *how* a student learned. Finally, progress criteria emphasize growth, *how much* a student learned, relative to set standards over a given period of time. Ultimately systems must decide what information is useful for all your stakeholders to know regarding grades. What needs to be communicated about a student's progress and current level of performance? How much evidence should support this “grade”?

- **What grade scale is used?** Your grading scale will depend on what scores compose your grades, but typically the grading scale should be derived from the learning progression of the competency map. More of this information will be discussed in the next section on grade calculation. However you approach the development of your scoring rubrics and rating system when it comes to grades, it is important to make sure your scoring rubrics and rating system are clearly explained in your grading policy document.

Grade Calculation

Grade calculation will depend on the scores and work included in grades. The schools in your district will need to consider how they want individual performances of learning weighted and/or if specific categories of assessments should even be weighted. The weighting will depend on how much value you want to give certain pieces of evidence based on your definition of mastery. Additionally, there are various calculation methods your district can use that are similar to traditional learning systems but, again, you will want to consider how your grade calculation embodies your vision and goals for mastery learning. Additionally, you will need to decide how student growth and work habits and/or behavioral factors play a role in grading or grade calculations. Here are some overarching questions to consider as you move through this decision-making:

- Do you need to translate your rating system to traditional learning system grades (letters or percentages), such as for applying to scholarships? If so, how will grade calculation work so as to maintain the integrity of the mastery learning?
- How will certain performances of learning be weighted in your grade calculations?
- How will you communicate your grade calculations to stakeholders?

There are many calculation methods to consider when reporting grades. Here is some guidance to consider as you design your calculations:

- **You can use statistical support with averaging techniques including mean, median, and mode.** Averaging scores on evidence of learning could generate an overall performance level that determines mastery. For example, skills that make up a competency can be scored on a rubric and then averaged to generate a performance level for each competency based on student performances of learning. One issue that can result from averaging is that performance levels change frequently and averaging might not paint an accurate portrait of student performance. In other words, if the performance level were calculated as a running average over the course of the year, it is likely that early, lower ratings would pull down the average, and as a



result, the performance level calculation would no longer provide an accurate and current snapshot of student performance.

- **Consider using the highest level of performance.** If you have determined that students can submit as many performances of learning as they want, your district may decide then to use the highest level of performance to certify mastery. For example, in some mastery learning systems, students can submit as many pieces of evidence as they wish to show they mastered certain competencies and only the top two performances (per the evidence requirement) will contribute toward the average that makes up the performance level. This means a student's overall average performance level for the competency is not negatively impacted by earlier assessments that perhaps earned lower ratings, because only the best ratings for the "evidence requirement" contribute to the overall performance level calculation.
- **You can use "trending" grades.** With the concept of "trending" grades, students are given grades that represent their most recent level of mastery because they can reassess to demonstrate their learning. For example, if it is the end of the unit, the final performance task is most heavily weighted regarding competencies mastered. The higher weight is given to the most recent scores to reflect the student's current performance.
- **You can calculate student growth and habits of work and/or other behavioral factors.** You can include process and progress grade calculations into the overall grade that you provide students. However, as noted above, these calculations or grades might better serve students as separate grades so they understand their performance on their actual learning versus the process of learning. Student growth is also representative of learning and can be factored into overall grade calculations, but will also need to be considered separately when scoring student work and thinking about individual grades for that scoring.

Crediting and Promotion

In a mastery learning system, students move along competency-based learning progressions; their performance level is clearly identified and tracked by competency or by skill. Promotion, then, becomes simply about advancement through demonstrations of learning at the various performance levels. Similar to the design of mastery learning systems that this guide proposes in the previous sections, what is exciting about the level of flexibility within a mastery system is that, if you have the freedom to do so, your school district can approach your crediting and promotion policy and systems with enormous creativity. For example, you could bundle sets of competencies and create a badging or certification system that celebrates and acknowledges students who advance in certain competencies to mastery levels for crediting and/or promotion. You could engage students in creating their own personalized graduation pathways in which they select from required and optional competencies and content standards to build their own milestones toward graduation. If the schools within your district have a particular theme, you could establish specific milestones that are connected to your themes. You could also take a slightly more traditional approach and still have "levels" of mastery that require a certain



performance level to be achieved for a certain number of competencies or skills in order to advance through grade levels or courses. Another similar approach would be to not require a specific performance level but require a certain measure of growth to be achieved to earn accreditation and/or promotion.

- **Crediting and Promotion by Grade Levels and/or Courses:** You will need to determine the minimum requirements for earning course credits or promotion in your mastery learning system. It may be helpful to think about this in one of two ways: 1) students can only earn credit when they show mastery at a particular performance level for a certain amount of competencies or 2) students have multiple pathways for earning credit that are not exclusively tied to performance levels of the competencies.
 - If you decide on the former, then you will simply need to determine the performance level (or course grade equivalent, per your grade conversion) and the evidence requirement that together represent “mastery” in your system, and then issue course credit to students who meet these criteria.
 - The second option—multiple pathways—decouples the earning of credits from the achievement of mastery at a particular level. You can create two pathways for earning credit: Mastery and Growth. Both pathways require students to fulfill the evidence requirement or portfolio of work established for all competencies across subject areas. The Mastery pathway requires students to show mastery at the target performance level; for example, if a student is enrolled in a ninth-grade course, they must achieve an overall performance level of 4.5 or higher in order to earn credit. The Growth pathway requires a student to show a minimum level of growth on course competencies in order to earn credit; for example, they must show an overall growth measure of .5 levels or more for each course competency in order to earn credit.
- **Crediting and Promotion by Competencies Demonstrated:** If you create learning opportunities that are not time-bound by grade levels or courses, then crediting and promotion can be demonstrated through a certain amount of performances demonstrated at mastery level for a certain number of competencies. For example, if your school district determines that students must reach mastery on eight out of the ten competencies with at least two performances each, students can then earn credit or promotion to the next level.
- **Crediting and Promotion by Growth:** Similar to crediting and promoting by competencies demonstrated, students can earn credit and/or promotion through a certain amount of growth between a present level of performance and target level of performance based on collaboration with an educator.



Potential Pitfalls

- **Scores and grades are not feedback in a mastery learning system.** Feedback is an instructional tool used in a mastery learning classroom and scores and grades are not feedback. Feedback provides students with actionable and specific ways they can improve their learning while scores and grades are cumulative representations of that learning and are not used for formative purposes.
- **Progress reports, transcripts, and benchmark progress reports can look different.** Your reporting tools, depending on purpose and audience, can look different but should talk to each other. Different audiences might need different information depending on their needs. For example, a parent might find it important to understand why or why not their student did not earn credit for a mastery-based course but that same information may be communicated differently to a student and a parent.

Final Thoughts

This guide opens with thoughts from Tony Wagner, who observed, "In this era of innovation, all students need essential skills and dispositions for work, learning, and citizenship—habits of mind and heart that cannot be measured by Carnegie Units." The work of defining and determining mastery is the work of equipping our schools, teachers, students, parents—indeed, all stakeholders—to cultivate those invaluable "habits of hearts and mind" that students must have if they are to be successful once they enter the world beyond graduation. Measuring those skills, however, is only the first step. Once mastery has been defined, once the policies and practices are in place to determine mastery, it is imperative that systems and schools commit to ensuring that all students master the competencies and standards. Nothing less will do.



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We recognize and commend those who undertake the challenging and important work of building equitable Mastery Learning environments for our students.

Thank you!