

CompetencyWorks ISSUE BRIEF

Necessary for Success: Building Mastery of World-Class Skills

A State Policymakers Guide to Competency Education

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With support from the leaders of the
Innovation Lab Network

INNOVATION LAB NETWORK

This paper could not have been written without the extraordinary leadership and generosity of the Innovation Lab Network. Since its inception, the Innovation Lab Network (ILN) has engaged schools, districts, and state education agencies working to identify through local efforts new designs for public education that empower each student to thrive as a productive learner, worker, and citizen. The state's responsibility is to establish conditions in which innovation can flourish and to develop capacity to sustain and scale what works through policy. The Council of Chief State School Officers (CCSSO) facilitates this network of states—which includes California, Iowa, Kentucky, Maine, New Hampshire, New York, Ohio, Oregon, West Virginia, and Wisconsin—to support programmatic, policy, and structure design work within each participating state and across the network.

While the ILN is positioned to directly challenge the status quo, it anchors its work in six critical attributes as initial design principles for next generation, large-scale systems transformation. Those critical attributes include world-class knowledge and skills; comprehensive systems of support; personalized learning; performance-based learning; anywhere and anytime learning; and student agency. Collectively, ILN states use these attributes to pressure test new ideas, share evidence, and identify the components of infrastructure needed to support their work. By demonstrating and learning from work at the state, district, and classroom levels, the ILN seeks to catalyze thinking across all states about how to ensure that each child's educational experience is successful and enduring.

Acknowledgments

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About Competency Works

CompetencyWorks is a collaborative initiative drawing on the knowledge of its partners and advisory board. The International Association for K-12 Online Learning (iNACOL) is the lead organization with project management facilitated by MetisNet. We are deeply grateful for the leadership and support from the partner organizations American Youth Policy Forum, Jobs for the Future, and the National Governors Association. Their vision and creative partnership have been instrumental in the development of CompetencyWorks.



For more information on competency education, you can visit [CompetencyWorks](#), read previous issue briefs on the topic, or visit the [Competency-Based Pathways wiki](#) for an in-depth look at the working definition.

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NECESSARY FOR SUCCESS: BUILDING MASTERY OF WORLD-CLASS SKILLS

A State Policymakers Guide to Competency Education

I. Introduction

Our goal is to build a system that is built around kids.

– Stephen Bowen, Commissioner, Maine Department of Education

After two decades of major education reforms without seeing major gains for low-income students, state leadership is coming to the conclusion that there is something inherently wrong with America's K-12 system. There is something in the factory model—in which students chug along from kindergarten through high school, unless they fall off the conveyor belt before obtaining a diploma—that is reproducing low achievement and inequity, year after year, generation after generation.

States have called into question the time-based system built around the Carnegie unit and are now rapidly advancing an alternative. By establishing proficiency-based diplomas, credit flexibility, or seat-time waivers, 36 states are moving toward competency education.¹ In some cases comprehensive policy is being implemented, in others investments in pilots are used to engage districts, and in all of them innovation space is being created by lifting time-based policies.

State leadership and policy are the linchpin to competency education. Certainly, federal policy can help or hinder, especially around the high-leverage accountability and assessment policies. Districts and schools can implement competency education once seat-time constraints have been removed, but it is unlikely that they can grow and sustain fully developed systems that let our children soar to new levels of achievement under the burden of the time-based, agricultural schedules and rigid, age-based structures. It is firmly in the hands of state leadership to redesign policies for a student-centered system, rather than a time-based system.

Beyond redefining academic standards and setting world-class knowledge and skills, the new state policy role is to open the system up to innovation and provide the assistance and support for fomenting a revolution in the education system around student learning. It is a state leadership role to value the creativity of districts and schools, creating opportunity for iteration, input, and partnership. No matter how you look at it, state leadership has the most influence and the greatest responsibility to bring forth a new education system by focusing on student-centered systems; this must be done, or we will remain locked in 19th century models of education.

This paper offers an opportunity for state leadership to reflect upon their efforts and share their insights into re-engineering the policy and practices of our K-12 systems that were built over hundreds of years. In this paper, we introduce the concept of competency education and explain why the traditional time-based system is holding back our children and our nation. We will discuss the important initial steps taken by states in introducing competency education. Then we will draw on interviews with state leadership about their strategies, lessons learned, and the emerging policy infrastructure that is needed for full alignment with competency education. We close with some thoughts about creating a culture of competency within state agencies.

Please consider this paper as a first look at the role of state leadership in advancing competency education. Many of the sections will open the door to much larger issues that could be the topic of full papers themselves. In order to continue the conversation, we have created a section in the Competency-Based Pathways wiki that is full of resources, links to videos, and other tools.

II. Introducing Competency Education

What do we know about learning? Learning only takes place when students are engaged. We learn by connecting concepts and building expertise over time. If we do not learn a concept, new learning cannot be built on it.

– Paul Leather, Deputy Commissioner, New Hampshire Department of Education²

There is a growing chorus of voices throughout the country calling for the redesign of public education around a student-centered, customized learning approach that will better engage, motivate, and prepare all students to be career and college ready.

In 2010, a diverse group of leaders advocating for innovation in the education sector gathered at a symposium sponsored by the Software & Information Industry Association, ASCD, and Council of Chief State School Officers.³ Ninety-one percent of these leaders very strongly or strongly agreed that “We cannot meet the personalized learning needs

MANY TERMS, ONE GOAL

The goal of having children demonstrating proficiency all along the way to college and career readiness is shared across our states but the language varies. New Hampshire and Iowa use “competency-based education,” and others such as Maine and Oregon refer to it as “proficiency-based.” After several years of referring to it as “competency-based,” the U.S. Department of Education introduced the term “mastery-based” in the 2012 Race to the Top competition. Among the districts and schools that have implemented competency education, other terms are used such as “performance-based” and “standards-based.” For the purposes of this paper, we are referring to it as “competency education.”

of students within our traditional system—tweaking the teacher/classroom-centered model is not enough, and systemic redesign is needed,” and offered this set of assumptions to support movement toward a personalized, competency-based model:

- Today’s industrial-age, assembly-line educational model—based on fixed time, place, curriculum, and pace—is insufficient in today’s society and knowledge-based economy. Our education system must be fundamentally re-engineered from a mass-production teaching model to a student-centered, customized learning model in order to address the diversity of students’ backgrounds and needs, as well as our higher expectations for all students.
- Educational equity is not simply about equal access and inputs, but also ensuring that students’ educational path, curriculum, instruction, and schedule be personalized to meet their unique needs, inside and outside of school. Educational equity meets all students where they are and helps them achieve their potential through a wide range of resources and strategies appropriate for their learning styles, abilities, and interests, as well as social, emotional, and physical situations.
- Personalized learning requires not only a shift in the design of schooling, but also a leveraging of modern technologies. Personalization cannot take place at scale without technology. Personalized learning is enabled by smart e-learning systems, which help dynamically track and manage the learning needs of all students, and provide a platform to access myriad engaging learning content, resources, and learning opportunities needed to meet students’ needs anywhere at anytime, but which are not all available within the four walls of the traditional classroom.

A competency-based system, as defined below, ensures that every student will become proficient and starts with the simple commitment to teaching students based on where they are in building skills and ensuring that they are being challenged. It begins with the premise that students should be in their optimal developmental zone so that they are engaged and challenged but not frustrated. Competency-based approaches require alignment around five key elements.⁴

- Students advance upon mastery.
- Competencies include explicit, measurable, transferable learning objectives that empower students.
- Assessment is meaningful and a positive learning experience for students.
- Students receive timely, differentiated support based on their individual learning needs.
- Learning outcomes emphasize competencies that include application and creation of knowledge, along with the development of important skills and dispositions.

As knowledge builds, the definition of competency education is being enhanced. The Proficiency-Based Learning Task Force of the Smarter Balanced Assessment Consortium (SBAC) developed an expanded definition, emphasizing that instruction is personalized, students direct their learning, and a variety of assessment methods including performance assessments be available.⁵

We are beginning to see results. Those districts that have committed to competency education—such as Chugach School District (Alaska)⁶, [Adams 50](#) (Colorado), and [Lindsay Unified](#) (California)—are turning schools around and seeing improvements in student achievement scores. Within the first six months, pilot districts in Iowa saw grades and attendance increase and disciplinary problems decrease.⁷ As districts in New Hampshire and Maine work through implementation issues, achievement is increasing and drop-out rates are on the decline.⁸

While states meet the challenge of implementing the Common Core and state standards, emphasizing greater rigor and deeper application, they are confronted with the fact that the time-based system may not be up to the task. The concept of competency education challenges many of the long-held traditions and practices of the contemporary education system. First and most importantly, it points out that students' learning experiences should be designed with the specific intent to meet them where they are in the learning journey and to support their continuous progress toward predetermined outcomes. Ensuring that children are learning deeply rather than just "covering the curriculum" is the driving force behind competency education. Second, competency-based approaches share the idea of letting time, approach, and even location for learning vary as required to attain quality of learning, which requires a high capacity for differentiation. Third, these approaches require clear definitions of the prerequisite learning progressions and ways of assessing whether they have been mastered. What matters is that all students progress based on mastery—students are no longer passed along with significant gaps of understanding only to fall further and further behind.

The implications are many, but one thing is clear: competency education generates a powerful force in which schools are being designed around students and their needs, interests, and learning. At this stage in the innovation curve, every school can become a new school.



For more information on competency education, you can visit [CompetencyWorks](#), read previous issue briefs on the topic, or visit the [Competency-Based Pathways wiki](#) for an in-depth look at the working definition.

III. An Overview of State Policy Approaches

States are taking different routes toward competency-based systems. The context of these entry points will shape their overall strategies, policy agendas, and the realignment of their policy infrastructures. Although some states need to address seat-time policies, other states such as Colorado do not have formal policy basing credits on Carnegie units. Below is a quick overview of their entry points into creating innovation space for districts and schools.

Redesign

Maine, New Hampshire, and Oregon have taken decisive leadership in aligning their policy infrastructure to support competency-based learning.

- In 2012, Maine's state legislature passed [LD 1422](#), emphasizing personalization and implementation of proficiency-based high school diplomas beginning with the class of 2018.⁹ Students will also be required to demonstrate proficiency in all five of the state's Guiding Principles, a set of 21st century cross-disciplinary skills.
- In 2005, [New Hampshire's Department of Education](#) boldly transformed Carnegie credits into competency-based credits for all secondary schools in a revision of the Minimum Standards for School Approval. The expectation by the State Board of Education that all districts convert to competency-based courses in high schools by the fall of 2008 opened the door to the ongoing redesign of the state's system of assessments.

- Since 2003, [Oregon](#) offered enabling policy for schools to use proficiency-based approaches through an administrative rule for credit options. Between 2004 and 2006, state investments in pilot projects have catalyzed significant policy enhancements, including grading and assessments.

[Iowa](#) is now entering the redesigning process, starting with the passage of legislation in 2011 that eliminates the requirement that high school credit be based solely on the Carnegie unit and initiating a task force to provide guidance for further policy changes and implementation.

In general, the states with the most intentional redesign strategies are focused on ensuring that students are getting what they need to be proficient in the skills needed for college and careers when they graduate, rather than increasing the rate at which students progress through the system. They have a laser focus on helping students reach proficiency. Although each state has a different theory of change and is in a different stage of their implementation, there is a high level of similarity in the issues on which they are focusing, including strong attention to local implementation to ensure quality that will benefit low-income students.

Areas of Nonconsumption

Competency education can find a safe place to develop in areas of the system where students' needs are not being met, including increasing access to education through online learning and by serving students who are over-age and under-credited through credit recovery and alternative schools. However, even if these courses or school models are designed to be competency-based, scaling competency education may be an issue if schools must navigate the state's time-based policies that inhibit innovation.

This was the situation for [Alabama's ACCESS](#), the state's virtual school distance learning program that provides online AP courses to every high school. To remedy this, the Alabama State Board of Education adopted a resolution in 2008 allowing courses taken online to have flexibility from seat-time and allowing credit accumulation or credit recovery to be proficiency-based. Similarly, [Florida Virtual School](#) (FLVS) was created in 1997 to offer student-centered, competency-based courses for students who wanted access to courses otherwise unavailable. Later, understanding that time-based policies were constraining the model, Florida's state legislature introduced enabling legislation for FLVS to offer open entry/open exit, flexible pacing, and scheduling, thereby allowing students to advance upon demonstrated mastery and performance-based courses. Instead of seat-time funding that would lock in schedules and traditional pacing, Florida legislature introduced performance-based policy where students who completed their coursework received credit for courses only if they passed the course's final examination (FLVS creates its own final examinations) and FLVS is paid based on completion of credits, not seat-time or attendance.

Innovation Zones

Some states are promoting general innovation without specifically setting the direction for a competency-based system. For example, in Colorado, the [Innovation Schools Act](#) (2008) provides opportunities for schools and districts to develop innovative practices, better meet the needs of individual students, and allow more autonomy to make decisions at the school level. In Kentucky, [HB 37](#) is creating Districts of Innovation for redesigning student learning in an effort to engage and motivate more students and increase the number of students who are college and career ready.

State education agencies are fostering local innovation with dedicated offices to partner with innovative districts and schools to address barriers and constraints while playing a catalytic role to diffuse the new approaches throughout the system.

Credit Flexibility and Waivers

Over half of these states have introduced the concept of competency education through credit flexibility policies or the ability of districts to apply for waivers.¹⁰ In fact, Maine started with a waiver policy. In most cases, states have set limited expectations for what needs to be in place to ensure quality, delegating responsibility to the district. In 2009, Ohio's State Board of Education adopted a [credit flexibility policy](#) for high school students to complete credits through multiple methods, including by demonstrating proficiency. District school boards have authority to establish the policies regarding competency-based courses.

Waivers and credit flexibility provide some innovation space; however, there are three substantial risks: one is low uptake; second is poor implementation or a lack of attention to high levels of rigor and deeper learning; and third, without having a system of support in place for educators, districts and schools may end up duplicating efforts in learning how to build the infrastructure of competency education, including the competencies, rubrics, classroom management practices, information management systems, and new approaches to grading.

Gateways

Some states are establishing gateways as a way of making sure that students are reaching proficiency, such as in third grade reading policies and high school exit exams policies. Of the 32 states with third grade reading policies, over one-third of them include retention policies if students do not demonstrate proficiency.¹¹ Of the states using high school exit exams, few have been performance-based. However, states involved in the [National Center on Education and the Economy's \(NCEE\) Excellence for All](#) initiative are using board-certified examinations to determine when students have mastered the high school curriculum. For example, in Arizona, the [Move On When Ready](#) initiative allows students who pass the performance-based examination to receive the Grand Canyon High School Diploma as early as the end of grade 10.

The risks are two-fold in a gateway policy, especially with complementary retention policies, as a technique for introducing the concept of progress upon mastery. First, although designed to ensure proficiency, it can become counterproductive, sending harmful signals to students and parents. Thus, gateway policies have the potential to become a mechanism for reproducing inequity. Second, it may emphasize academic knowledge over the skills and dispositions that we know are vital for college and career readiness. Gateway policies must be designed to provide adequate support, absolute transparency about what is needed to pass through the gateway, and options for providing evidence of learning in different ways.

iv. Setting the Direction

We can do anything but we can't do everything so let's make sure we focus our efforts on those things that matter most for kids, their learning, and their future choices.

– Dr. David Tilly, Deputy Director, Iowa Department of Education

As states undertake the journey from institutionally bound systems to student-centered systems, many are migrating to competency-based education as the most natural way to recognize individualized learning and organize just-in-time strategies that will lead to growth and deeper learning. This is fundamentally a matter of equity—a way to ensure that all students are given the right to be held responsible and supported in pursuit of the high expectations that will ensure they are truly ready for next steps building on the foundation of the Common Core State Standards. There is tremendous risk and responsibility associated with competency-based systems in this regard; when implemented without preparation and comprehensive supports for both learners and teachers, they can be executed so poorly that they are yet another false promise to students who are already at risk.

The burden falls heavily on state leaders to build a common vision and consensus for change across the variety of perspectives held by diverse constituencies and to develop capacity to move toward that vision in ways that are convincing and compelling. Undertaken alone, this level of systemic transformation can be a daunting task; however, it can be made somewhat easier with collaboration. State leaders are finding that participation in state networks, such as the [Innovation Lab Network](#) (ILN) and [New England Secondary Schools Consortium](#) (NESSC), is invaluable for accelerating their learning, fine-tuning policy development, and using resources wisely in the development of new capacities. Often state networks can offer greater freedom in supporting innovation within and across states, such as the ILN's research on learning progressions and NESSC's League of Innovative Schools.

The following discussion explores the primary leadership functions of state education leaders in the initial stage of introducing competency education:

- Rationale for competency education
- Public discourse and critical conversations
- Innovation and implementation
- Systems of supports for educators

Rationale for Competency Education

Education leaders embrace competency education for many different reasons, each of them equally important. Some focus on the challenges facing their state, others focus on the opportunities. All need to provide a vision for how the elements of the traditional system must change and what the future of education will look like. Below are examples of the rationale state leadership uses to create a compelling argument for transforming education.

- **Equity:** To ensure that our traditionally underserved children learn to high standards.
- **College, Career, and Civic Readiness:** To ensure that all students succeed in developing the knowledge, skills, and disposition necessary for their success.
- **Economic Imperative:** To strengthen our economy through a workforce that is prepared to succeed in a global, knowledge economy.
- **Graduation Crisis:** To increase student engagement and provide greater flexibility for students who otherwise might not graduate from high school because they are significantly behind in credits and skills.
- **Aligning System to Purpose:** To create multiple pathways where learning is the constant and time is a variable.
- **Customization:** To take advantage of digital learning that empowers personalization, expanding students' voice and choice, to learn at their own pace, anywhere and anytime.

Oregon's vision for education is that every child achieves academic success. Proficiency-based education is vital to our efforts.

– John A. Kitzhaber, M.D., governor of the State of Oregon

Public Discourse and Critical Conversations

Competency education involves deep, “second order” change.¹² This requires adaptive leadership approaches that include asking powerful questions, listening, co-creating, and negotiating. State leadership can play a catalytic role in creating the public discourse needed for people across a state to engage, reflect, and help shape the new direction for education. As summarized below, state leaders are employing a variety of approaches.

- Iowa’s legislature established a [task force](#) charged with making recommendations regarding important aspects of competency education, including personalized learning plans, support to teachers, and assessment.
- In the early stages of bringing forth a vision of personalized, proficiency-based learning, Maine Commissioner Stephen Bowen organized a listening tour to visit schools, host public forums in nine regions of the state, and meet with district leaders. He used the [Department of Education’s website](#), as well as social media, to share his thoughts along the way.
- The Kentucky Department of Education convened 150 people for a statewide, multi-sector meeting to produce a [report and web page](#) to help others better understand competency education.

State leaders agree: dialogue with every constituency must occur early and often and in a variety of contexts—small groups, large groups, one-on-ones, and as part of ongoing advisory or planning efforts. From the initial stages through implementation, conversations are important to continue building understanding and

support, as well as to inform state leadership about issues of importance to constituents. State leaders see these conversations as the seeds of future partnerships and collaborations, seeking out opportunities for co-sponsorship of events, work groups to tackle tough issues, and new opportunities to draw on expertise in piloting elements of competency education.

Parents

State and district leaders realize that parents can—and should be—a powerful force in the shift to competency education. A frequent concern of parents is the potential impact of competency-based transcripts in college admissions. Often parents of those students who have succeeded in the traditional education system are wary and likely to have the know-how and networks to influence state and district decisions. One state leader cautioned that the role of leadership is not to rush to resolution but to create a space for discussion. This means building the conversation with parents over time toward a better understanding of how the time-based system leaves even the best students with gaps in their skills and of what a competency education model might look like. Although engaging parents is primarily the role of district and school leadership, state leadership can be supportive of their community engagement process. At the recent convening, the Kentucky Department of Education created opportunities to exchange strategies to involve and educate parents. The five-state New England Secondary Schools Consortium offers [resources](#) to help education leaders prepare to talk with parents and other constituency groups.

Higher Education

Obviously, higher education personnel must be engaged and connected with continually through the process of transitioning to competency credentialing. In Maine, early engagement was multi-tiered starting with the Department of Education convening presidents of higher education institutions, and then in subsequent meetings with admissions directors. Two years later, the New England Secondary Schools Consortium is supporting the Maine Department of Education and higher admissions directors to develop a model proficiency-based transcript.

Business

State leaders know the importance of business engagement. In Oregon, the [Business Education Compact](#) (BEC) has been one of the driving forces in advancing proficiency-based education. The BEC is supporting pilots, organizing technical assistance, hosting annual conferences for educators, and maintaining a library of educator tools. In Maine, a new organization called Educate Maine was created to engage business leaders in the passage of [LD 1422](#), establishing proficiency-based high school diplomas. [Educate Maine](#) has created a pathway for business leaders to engage directly with legislators in support of personalized, proficiency-based learning.

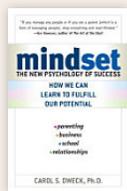
Internal Constituents and Unions

Teachers and other school and district personnel care deeply about the success of students and the system as a whole. They hold tremendous responsibility for implementing change and must be involved deeply from the outset. Further, school personnel remain one of the most credible sources of information about the health and well-being of schools with the community. New Hampshire focused on changing the nature of the relationship with their teachers' union—moving from critical conversations to collaborative partnership. Together they are supporting a math learning progressions pilot in three elementary schools in Nashua, part of the ILN's initiative to better understand the major conceptual stepping stones and pathways that are essential building blocks of competency-based systems.

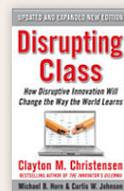
New Hampshire leaders have observed that as understanding of competency-based precepts increased, so did the consensus and commitment to move forward. Thus, constantly engaging various constituencies, listening to their ideas and concerns, and creating opportunities for shared learning are essential.¹³

RECOMMENDED READING

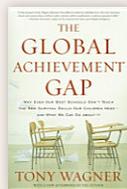
One way to build a common vision and understanding is to engage educational and community leaders in reading the same books and articles. Don Siviski, Superintendent of Instruction, Maine Department of Education and the Maine Cohort for Customized Learning, suggests the following books to build demand and excitement for making the transformation to next generation learning and competency education:



Mindset: The New Psychology of Success by Carol Dweck



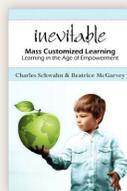
Disrupting Class: How Disruptive Innovation Will Change the Way the World Learns by Clayton Christensen, Michael B. Horn, and Curtis W. Johnson



The Global Achievement Gap by Tony Wagner



Delivering on the Promise by Richard A. DeLorenzo, et al.



Inevitable: Mass Customized Learning: Learning in the Age of Empowerment by Charles Schwahn and Beatrice McGarvey



Building a New Structure for School Leadership by Richard F. Elmore

Innovation and Implementation

Competency-based education truly has the power to transform our school system. We must fuel this innovative spirit.

—Jason Glass, Director, Iowa Department of Education

Once the direction has been set, one of the first decisions state leadership will have to make is the strategy for change, the theory of action—how to bring about competency education. Everyone agrees that a top-down compliance model simply won't work. So what will work? The most important thing for states to do is create conditions in which innovation can thrive. Second is to avoid mixed signals whenever possible, such as saying that time is variable but only measuring four-year graduation rates or encouraging teacher professional development while only allowing teachers to certify achievement in narrowly defined content areas. Finally, states can organize resources so that the process of implementation is also a process of knowledge building. States are creating opportunities for district and school leadership to have time to envision, test ideas, reflect, and inform state education agency SEA staff so that a shared understanding of competency education is developed.

Creating a Road Map

Competency education calls for systemic change—realigning all the elements of the education system around student learning. It can't happen all at once, so a road map is called for that can guide SEA staff, district leadership, and even engage the general public. States need to have a theory of change. New Hampshire and Maine started with a clear vision of readiness for college and career success for all children, supported by an overarching policy of proficiency-based diplomas. This state policy approach is predicated on the assumption that the driving force for change, the capacity for innovation, is generated at the grass-roots level. The role of the state is to support districts and schools as local innovators and to identify and address common issues and challenges.

States can also give start-up support by providing the tools to accelerate the process. In Maine, many of the school administrative units asked for assistance mapping out a plan toward systemic redesign. Maine's Department of Education offered a system redesign planning tool developed by the Global Education Leaders' Program (GELP). This tool helped leaders see the complex interplay of systems and subsystems that must be brought into alignment. The [Western Maine Education Collective](#), realizing how important it is to keep a steady course through the complexity of systems change, has contracted with a systems change partner.¹⁴

Finally, strategic plans provide vision and guiding principles and establish a culture of transparency. Maine's [Education Evolving](#), the strategic plan that is guiding their efforts to create a personalized, proficiency-based system, offers an example of a state-level proposal for building an overarching rationale for change and bright vision. This provides district leaders with a sense of direction, a timeline, and mileposts as they craft local action plans. Iowa created state guidelines for districts to consider in shaping their innovations, including student advancement based upon mastery, explicit and measurable learning objectives that empower students, meaningful assessment of progress, rapid differentiated supports for students who fall behind, and learning outcomes that emphasize application and creation of knowledge.

Pilots, Proof Points, and Building Knowledge

In order to move forward, states need to be able to point to schools that are effectively using competency-based approaches that are benefiting students. Depending on the overall strategy, states may think about these as pilots, proof points, or an ongoing research and development process. The [Oregon Department of Education invested in pilots](#) in seven districts to introduce and learn about competency-based models in the classroom. Each district received \$9,000 over two years. The pilots were designed to 1) offer flexibility to meet students' diverse needs, interests, and level and rate of learning; 2) create additional options for students based on Oregon's standards and accountability system; and, 3) empower and encourage local decision making and creativity in awarding credit for learning both in and out of the classroom.

That standardized testing and the accompanying accountability provisions of laws like the No Child Left Behind Act have failed to improve our schools to any significant degree, despite the best efforts of the educators working in them, suggests that the challenge we face is more fundamental in nature. It suggests a design problem. The basic architecture of our system of schooling was established, after all, more than a century ago, for an industrial age that has all but vanished.

– [Education Evolving: Maine's Plan For Putting Learners First](#)

New Hampshire, partnering with the [National Commission on Teaching & America's Future](#), invested in five [Learning Studios](#).¹⁵ Learning Studios emphasize the design process in which business partners, cross-curricular teams of educators, and youth became active co-creators of competency-based, project-based learning. They are building a shared evidence base by using common assessments, exchanging data, and engaging in continuous improvement cycles as they learn what works. Through these repeated cycles, the labs are discovering and documenting concrete practices that improve student agency, embed technology, and increase student achievement.

States are building new capacity to become the catalytic engine for learning innovations and competency education. The influx of digital learning tools and advances in the learning sciences opens up a new world of understanding about how and under what conditions students learn. One example of state leadership in building knowledge is the Learning Progressions Initiative (LPI). The term “learning progressions” is being used by the states within the ILN to refer to interpretations of empirical evidence of how students' understanding and skill actually tend to develop over time with instruction and experience. Currently, eighteen schools in six states—Kentucky, Maine, New Hampshire, New York, Wisconsin, and West Virginia—are working with researchers to test hypothetical learning progressions in elementary and middle school mathematics and English/language arts.

Innovation Zones

In 2012, Kentucky passed legislation to create [Districts of Innovation](#) to encourage innovation and improvement. With the ability to be exempt from certain administrative regulations and statutory provisions, as well as local board policy, districts will have the freedom to develop transformative models. The Kentucky Department of Education opened the [Division of Innovation and Partner Engagement](#) to support districts in their applications and enable rapid prototyping. Although a district, New York City Department of Education offers valuable

insights into creating innovations sectors. In its [iZone](#), schools receive substantial supports, including technical assistance from [external partners](#) and resources for teacher professional development and new technologies. In creating a community of schools on similar trajectories toward personalization, the schools are working with the district to break down barriers and challenging seat-time rules and rigidity in budgeting practices.¹⁶

State leaders emphasize that the challenges of implementation need to draw the same level of attention as policy issues. By far the hardest work of transforming competency education takes place in classrooms, schools, and districts. Teachers will need to learn different management techniques. They will be challenged to rethink their roles—and the roles of students—and build their teaching toolkit to respond to students who are struggling. Principals will discover that they will need to continually engage parents in deep conversations, deploy resources differently, and create more opportunities for teachers to work more flexibly and collaboratively in order to support students. Districts will need to create a culture of continuous improvement, create innovation space, and develop new structures to support schools.

Systems of Supports for Educators

States are creating mechanisms to support districts, schools, and educators to engage in learning based on two assumptions. First, that implementation takes place locally, so structures should be designed to support all practitioners in response to where they are in their own learning process. Second, that knowledge about competency education is held by the people with more experience. Thus, peer learning is often emphasized. Below are examples of the structures that aim to support educators.

Networks and Communities of Practice

[The New Hampshire Education Networks](#) is a new model of support providing opportunity for technical assistance, knowledge building, and innovation. Partnering with 2Revolutions, the New Hampshire Department of Education (NHDOE) has developed this learning model based on network theory. Three sets of networks have formed—Technical Assistance, Knowledge, and Innovation—to connect people through webinars, discussions, and sketch boards and to inform and deepen instruction. Ultimately, this networked knowledge sharing system will shift the role of the state from a compliance orientation to a support orientation.

States are finding that peer-to-peer support is an effective strategy for competency education as it establishes a learning culture, allowing questions to be addressed by people who are operating in the same policy context. The peer-to-peer networks need structure to ensure that they actually operate as professional learning communities. In Maine, the state partners with the [Maine Cohort for Customized Learning](#) that has now grown to include forty districts. The Cohort meetings allow district and school leaders to share knowledge, collaborate, and mentor new superintendents who are at initial stages of their learning. Also, the Oregon Business Education Compact in partnership with the Confederation of Oregon School Administrators holds an annual conference for peers from across the state to learn from each other.

Technical Assistance and Professional Development

For students to learn, our educators must be able to build their own skills as well. States are deploying resources to accelerate the pace at which educators learn about competency education and build the skills to implement

effectively. The Maine Department of Education partnered with the [Re-Inventing Schools Coalition](#) (RISC) to offer training on awareness, shared vision, leadership, and classroom management in a proficiency-based environment. To share learning more broadly, it created a virtual [Center for Best Practices](#) with case studies, videos, and resources.

Other states are creating specialized portals and platforms as well. The Oregon Business Education Compact has created a [Proficiency Portal](#) for classroom tools for educators. Through the available resources, teachers have engaged over 90,000 students in learning proficiency-based approaches.¹⁷ Kentucky is creating a knowledge platform for establishing these models sharing information and providing an online side with strong feedback loops and reporting for rapid prototyping.

One of the best things states can do is make it easier for districts to use existing resources to provide professional development that is aligned with the transition to competency education. As described in the case study "[The Long Conversation](#)," after educators in Maine's RSU 2 embraced "learner-centered" approaches through an employee vote (83%), then Superintendent Don Siviski began to organize resources for professional development. The district leveraged all professional development funding toward training staff in this methodology while suspending all other activities. New Hampshire's networking strategy is based on choice and flexibility so that districts and schools get the support they need when they need it. NESSC's [League of Innovative Schools](#) has been able to leverage state funds to respond to the unique needs of schools in the process of transformation.

A POLICY FRAMEWORK FOR COMPETENCY-BASED AND NEXT GENERATION LEARNING¹⁸

At the Competency Education Summit in 2010, the following framework to guide state leaders was proposed.

- **Drive Policy by Student Learning Outcomes:** Focus on student learning and student learning outcomes. First and foremost, policies should be made to support the needs of students.
- **Guard High Academic Standards:** States will need to be vigilant to ensure that academic expectations do not slip, resulting in lower achievement for groups of students. Focus on equity with high expectations for all students.
- **Expand Student Options:** State policies should expand, not limit, the options that students have to reach learning outcomes.
- **Create Shared Vision:** Policy development cannot be top-down. It will be important to keep communication open, inviting stakeholders to contribute to the vision and the steps to get there.
- **Offer Districts and Schools Flexibility:** Be clear about desired outcomes and then provide incentives for educators to take different pathways to achieve the goal. Remove process rules and regulations in order to allow and encourage innovation.
- **Commit to Continuous Improvement:** Policy will need to evolve as we learn more about the dynamics of next generation learning, requiring ongoing improvement efforts.

v. Aligning the Policy Infrastructure

At the root of this work is a clear focus on ensuring that students have the opportunity to learn and develop the skills they need to succeed in life after graduation—whether that skill acquisition happens in the classroom or in the community.

– Susan Castillo, former Oregon Superintendent of Education¹⁹

This section explores the ways in which states are considering policy changes to support realigning their education system around personalized, competency-based education. States that start by waiving seat-time find experimentation is weighed down by the reporting, rules, and policies of the traditional system. Creating a competency education system requires more than waivers or removing time-based practices. It calls for an alignment of policies around student learning.

There are a multitude of design choices to make in realigning the system. States may make different design choices at the state level or determine that certain decisions are better made at district or school levels. These strategic decisions may change as implementation moves further along. What is important is that districts and schools have the opportunity to continue to innovate.

The most important consideration for states is to select high-leverage policies for ensuring quality models that benefit our traditionally underserved students. As states go through the process of realignment, they are creating new capacities.²⁰ When aligning and centering policies around learners, not time, one theme will continue to arise: the capacity to provide students adequate time and interventions to advance based on mastery. It is the most dramatic departure from our current system of “Swiss cheese learning,”²¹ which allows students—even the top performers—to move ahead with gaps.

The following discussion explores the areas of realignment.

- High expectations for all children
- Development of the education workforce
- Student progress and graduation
- Embedded and extended learning opportunities
- Systems of assessments
- Emerging issues, including accountability, productivity metrics, information systems and school financing

High Expectations for All Children

The absolutely essential role of state leadership is to establish a clear vision for the end goal of K-12—college and career readiness—the standards that will get our students there, and the level of proficiency we expect

along the way. The Common Core State Standards are providing the infrastructure in most states in ELA and mathematics.²² Standards in other disciplines are being developed through the collective effort of many states, with states such as Texas and Virginia choosing to invest in their own standards.

Implicit in competency education is a holistic approach to children’s development that goes well beyond a narrow focus on academic skills. Competency education designs around the knowledge, skills, and dispositions that children need in order to be successful in all facets of learning.

College and Career Readiness

The rhetoric of our nation is that all students should graduate from high school college and career ready (CCR). Competency education forces the conversation to become explicit about the knowledge, skills, and dispositions we expect students to have and to be able to apply in the real world. For example, under this system, it is not sufficient to require four years of math; we must specify the math skills that we expect students to develop and use.

In some states, defining the meaning of the high school diploma rests with the state and in others it is in the hands of the district school boards. Those states that hold the responsibility for doing so are working to develop clear expectations. Members of the ILN have expanded the definition of College and Career Ready (CCR) to include knowledge, skills, and dispositions that will inform the development of systems of assessment and revised accountability structures to monitor individual student progress, as well as lump-sum school measures.²³ For example, New Hampshire expanded its definition of CCR drawing upon the ILN’s definition. This definition of CCR informs the emerging systems of assessment and revised accountability structures.²⁴

New Hampshire Definition of College and Career Ready

College and career ready means that students graduate from high school prepared to enter and succeed in postsecondary opportunities—whether college or career—without need for remediation.

- Student should graduate fully prepared to pursue the college and career options of their choice.
- College ready refers to the full range of programs leading to valuable, recognized degrees, including community colleges and four-year colleges.
- Career ready refers to employment opportunities with meaningful opportunities for advancement as well as career training programs that offer technical certification or other marketable skills
- Evidence and experience indicate that the knowledge and skills needed to succeed in college and career are greatly similar, and that all graduates will need some form of postsecondary education or training to succeed during their careers.

To be college and career ready, students must graduate with the knowledge, skills, and dispositions necessary to succeed. These are the kinds of deeper learning outcomes that are at the heart of being college and career ready.

- Knowledge, skills and dispositions are mutually reinforcing, and not contradictory. That is, evidence and experience confirm that education that advances application of knowledge through skills is more likely to result in student competency of the underlying, rigorous content of knowledge.
- The knowledge, skills and dispositions have concrete meaning and can be expressly taught, learned, and measured. This will require multiple, robust measures of evaluation and assessment.
- This same set of knowledge, skills and dispositions is also vital for student success in terms of citizenship, in addition to college and career readiness, including the ability to contribute and succeed in our increasingly diverse, democratic, global society.

New Hampshire is also making a distinction between college ready and career ready. Engaging the New Hampshire Business and Industry Association, discussions are ongoing about the standards for career ready as being different from a job that can be measured by entry-level employment.²⁵

An Iowa Department of Education work team has agreed on six constructs that are necessary outcomes for each Iowa student to graduate prepared for success in career, college, and citizenry. These include critical thinking, complex communication, creativity, collaboration, flexibility and adaptability, and productivity and accountability. Often referred to as habits at the school level, these constructs have helped to develop clear expectations of the dispositions students are expected to master to graduate from high school.

Once a state has made the decision to go this direction, the first thing they need to realize is the infrastructure has to be reconstructed.

– Paul Leather, Deputy Commissioner, New Hampshire Department of Education

Development of High-Quality Competencies and Knowledge Frameworks

Well-designed, standards-based competencies and their complementary rubrics are at the heart of competency education. Building reliable and valid competency systems requires learning progressions—stepping stones of learning—that are based on the empirical evidence for the cognitive pathways that get most students from one level of understanding to the next. They are the road map for learning. If we can't define what we want students to know and be able to do, how will we ever help them to get there? With states having set core academic standards, at this point, most states see the underlying knowledge frameworks, competencies, and rubrics as a local decision. Districts can shape the granularity, tone, and degree of portability. The [Maine Cohort for Customized Learning](#) (MCCL), a voluntary association of districts, are sharing their competency frameworks, allowing for innovation while also moving toward consistency across districts.

There are a number of benefits from this strategy, especially in that districts and schools need to become very intentional about the culture and philosophy of their school, which in turn shapes the language used in designing competencies, offers collaborative opportunities for teachers to build a common understanding of what proficiency looks like, and deeply roots an understanding of competency education in the schools. Classroom teachers who participate in the development of competencies, frameworks, and rubrics report that the tuning process—debating the competencies and the statements for what a student must know and be able to do—builds a deeper understanding of what students should achieve. A benefit of collaborative involvement across schools and districts is that competency methods can prepare more teachers to be more deeply attuned toward the nuances of learning objectives and how competencies might cut across disciplines.

New Hampshire offers a different perspective. In the early days of implementation, they selected Webb's Knowledge Framework to undergird their efforts. It was an important decision in that Webb's was the frame for their state assessments. Thus, there was clear and intentional alignment between the language used to determine depth of knowledge and the state assessments. Second, in response to concerns of a state-driven curriculum, they did not develop or write state-level competencies. Instead, they created the [competency validation rubric](#) to drive toward quality development of competencies. In addition, regional support services

were made available to help schools learn how to develop competencies and rubrics. Iowa is now in the process of creating a validation rubric to guide the development of high-quality rubrics across the state.

As districts and schools became engaged in the competency design process, they soon realized that they were duplicating efforts, especially given that competencies in math and ELA were going to be very similar because of the Common Core State Standards. In response, the SEA facilitated a process of developing statewide competencies to be released in 2013. Schools and districts can still modify the competencies to reflect their culture with the understanding that the competencies and rubrics will be the foundation of the state assessment system. Another benefit of statewide competencies is portability; students with high mobility—including those in child welfare, juvenile justice, and migrant families—can have greater educational continuity if schools are using the same competency framework.

We are clearly in a dynamic process as states, districts, and schools clarify roles. We can expect to see some states moving away from credits altogether, allowing competencies to mark student progress from kindergarten through graduation.

Development of the Education Workforce

The proficiency initiative is capturing the imagination and enthusiasm of educators across the state.

– Susan Castillo, former Oregon State Superintendent of Public Instruction

States have been working for years to improve the effectiveness of the teaching workforce, including teacher recruitment, preparation, and evaluation. However, there are a number of issues emerging around competency education that are requiring states to rethink their efforts to ensure alignment with competency education.

Changing Roles of Educators

State leaders realize that competency education opens up the doors to new school designs, ways to deploy staff, and signals shifting roles for teachers and learners. The skills needed by teachers in competency education emphasize assessment literacy and facilitation, as well as a growing toolbox for delivery of instruction. The New Hampshire Board of Education updated the language in teacher training regulations to reflect this change; the term “teacher” was replaced by “educator,” and expectations for the skills graduates would need to demonstrate were also upgraded.²⁶

Retraining and Professional Development

Competency education emphasizes elements of teaching that are different from the traditional methods. Furthermore, classroom management is very different in a personalized, competency-based setting. Assessment literacy and adaptive instruction are critical skills that teachers will need to develop with peers, as well as targeted professional development. As described previously, states are investing heavily in creating a system of supports for educators so that they can upgrade their skills in response to what their students need to progress.

Teacher Effectiveness

In competency-based schools, students are organized in new ways, and attributing value to individual teachers becomes more difficult since students may receive instruction and support from a number of educators, as well as through blended learning. In competency education, today's simplistic system gives way to a richer and more dynamic process where learning becomes personalized and students are no longer treated as a group. Thus, teacher effectiveness systems need to reflect the collaborative approach and, in and of themselves, be based on continuous improvement toward mastery, meaningful formative feedback, and deeper learning on the part of the teacher.

New Hampshire is designing their educator development and evaluation system to use multiple sources of student data. Oregon's strategy for teacher development is consistent with competency education, emphasizing "continuous improvement that includes self-reflection, goal setting, observations, formative assessment, and summative evaluation."²⁷ In SB 290, the Oregon State Board of Education sets the expectation that multiple measures of student academic growth will be considered in providing feedback to teachers.

Student Progress and Graduation

Competency education explicitly recognizes that students are different—with different sets of skills, different levels of maturity and identity, and different aptitudes, interests, and family supports. Given that our nation's policy is for all students to be college and career ready, one of the fundamental changes in competency education is the way students progress through the education system. This is a dramatic shift from our previous policies that allowed students to leave school at age 16 without the appropriate CCR skills. Thus, as states shift to competency education, a number of issues related to grading, high school credentialing, and graduation policies will arise.

Grading and Transcript Policies

There are two important aspects of competency education that challenges time-based practices and policies. First, it assumes that schools will never give up on kids. If students don't demonstrate proficiency, they are reassessed after working on the knowledge and skills in which they are weak. In fact, in many schools, students ask for reassessment to demonstrate exceeding proficiency as they strive for excellence and depth in their studies.

A second important aspect of competency education is that it values dispositions and behaviors, yet assesses them separately from academics. In competency education, turning in homework assignments, attendance, and behavior in the classroom are not included in grades. Competency education values the development of productive dispositions such as self-efficacy, adaptability, personal and social responsibility, initiative, self-control, professionalism, collaboration, and perseverance by developing distinct competencies and rubrics that are assessed separately from the development of knowledge and skills. Students receive feedback on knowledge and skills, as well as articulating dispositions through the instructional process.

Oregon's State Board of Education has integrated these dynamics into their revised policy on [Student Achievement Grading and Reporting](#).

- Students will have multiple opportunities to demonstrate mastery of academic content standards.

- Districts must respond to students who have not met or have exceeded the academic content standards with access to additional services and other public school or alternative educational options.
- Progress on academics will be scored separately from behaviors.

In Maine and New Hampshire, districts are developing their own grading processes. However, Maine is taking the next step by convening the admissions directors from higher education to develop a model transcript.

Competency-Based Graduation Requirements

Exploring policy around graduation rates requires a shift from a focus on Carnegie units earned to examining each student’s profile of competencies in their personalized learning plan. Earning a competency-based diploma is a major linchpin in the shift to giving our students the opportunity to expand choices in how they learn, when they learn, and what services can be made available to support their growth toward earning a meaningful diploma.

Arizona’s [Move On When Ready policy](#) allows students to earn a competency-based Grand Canyon Diploma, regardless of their age or grade. At this time, 30 schools are participating in this initiative across Arizona. Maine’s legislature has passed legislation requiring that a diploma from a secondary school be based on student demonstration of proficiency by 2018. New Hampshire’s education leaders are in early discussions about what a competency-based diploma—based on a competency framework, rather than course credits—might look like. Oregon expects students to demonstrate proficiency in the [Essential Skills](#), in addition to course requirements and personalized learning requirements, including the individual plan, career experience, application of their knowledge in a new context, and demonstration of knowledge and dispositions referred to as career-related learning standards.

Extended Graduation Rates

In competency education, time is a variable, including the time it takes to graduate from high school. In the process of agreeing upon methodology to monitor the graduation rate, the federal government established the use of extended graduation rates.²⁸ Yet less than half of our states are using the extended graduation rate as an incentive for districts and schools to continue serving those students who need more time to graduate. In reporting on graduation rates, [Colorado](#) highlights early graduates, on-time (four-year), five-year, and six-year graduation rates. The ability to provide adequate time for students to complete their high school education is complicated by the fact that states have different caps for how long students can remain in the K-12 system, and in some states, districts can make that determination.

Alignment with Higher Education

Engaging higher education leadership is essential to a successful shift to competency-based education. Several critical issues must be addressed in order to ensure a smooth transition for students between secondary and post-secondary learning experiences. States will need to increase access to college-level coursework while students are still in high school, including offering competency-based, dual-credit courses. Competency-based transcripts provide a much more fine-tuned description of what a student knows and can do than traditional transcripts. Institutions of higher education value the information from competency-based transcripts but still rely heavily on traditional GPA, class rank, and separate assessments in their student selection processes and placement. Building capacity for higher education to rely on competency-based credentials rather than traditional transcripts will require deep engagement of secondary and post-secondary decision makers. Other

topics that relate to higher education may include teacher preparation and system-wide alignment for P-20. These are difficult conversations that states need to address early on.

During the past year, [competency-based higher education](#) has become a hot topic. As states and higher education travel down this path, new opportunities will develop for a robust alignment between K-12 and higher education.

Embedded and Extended Learning Opportunities²⁹

Competency education will only be successful if students are able to access adequate interventions and time for them to become proficient. One of the most important and most difficult things for schools to do is create greater flexibility of time and place for learning. Beyond the seat-time policy, there are many other time-based policies that dictate to schools when and how they operate, including schedule and calendar. Many of these can be found in the small print of federal and state programs that provide additional support. Yet, even when time-based constraints are removed, many of these practices are intransigent. Below are some of the early inroads states are making in thinking beyond the traditional schoolhouse, school day, and agricultural calendar.

Community-Based Learning

Many states have policies that a student can receive credit through community-based learning such as work experience or service learning. However, few states or districts have the competencies in place to ensure that students are actually learning at the high standards on the route to college and career readiness.

Community-based learning, both work-based and service-based, can become an important part of competency education as students can be introduced to, practice, and demonstrate learning in real-world contexts. Furthermore, many of the dispositions required for CCR are better developed in project-based and real-world learning, such as through internships.

At the time that New Hampshire moved forward on competency-based credits, they also established a policy on [extended learning](#). In New Hampshire, extended learning is defined as the primary acquisition of knowledge and skills through instruction or study outside of the traditional classroom methodology, including, but not limited, to apprenticeships, community service, independent study, online courses, internships, performing groups, and private instruction. With transparent competencies in hand, students can take full advantage of these learning opportunities.

Online and Blended Learning

Online learning has become a driving force behind competency education. All states have students enrolled in online courses and blended learning. In high-quality online learning, students have digital tools, platforms, discussions, embedded assessments, and adaptive content resources within their teacher-led courses. Blended learning is growing in demand because it offers site-based schools instructional models to provide mastery-based, personalized learning at the student's pace. Without supportive and aligned state policy, the students are still bound within age-based grade, schedule, and seat-time structures—limiting the true potential of blended learning to create student-centered learning environments.

Maine's policy for 1:1 laptops provides the infrastructure to support blended learning within and beyond the classroom, within the context of competency-based policies. However, many states that have gone boldly down

the path of online and blended learning have done so without the alignment to competency education. For example, Florida created innovation space for [Florida Virtual School](#) (FLVS) that is competency-based and which allows students to have flexibility from seat-time and to advance through coursework when they demonstrate mastery. However, beyond the Florida state policy that provides seat-time flexibility for Florida Virtual School, the state has done little in the way of competency education. End-of-course exams are required of students in numerous subjects that are administered in a fixed, time-based schedule. Students must be tested at their zoned school, so the testing must occur when those school personnel are at work. Students who master the material and are ready for end-of-course exams may have to wait anywhere from three to eleven months before the next test session is offered.

Kansas has also put into place policies to enable students to take advantage of online learning courses. This has generated extensive district-level online learning activity, including districts offering supplemental courses and full-time schools serving students across the state. However, the state policy that allows flexibility from seat-time does not address attendance regulations for auditing and reporting. In fact, the auditing processes require that students log into lessons on the day that the lesson is scheduled, even if they have already demonstrated mastery and have moved ahead in the curriculum.

Competency Recovery

In New Hampshire, with its clear focus on competency-based credits, the [New Hampshire Virtual Learning Academy Charter School](#) (VLACS) has been empowered to respond to [unit or competency recovery](#), rather than credit recovery. Students and teachers can focus on the unit where they need help, rather than wasting their time and state resources on reviewing what they already know by retaking an entire course.

Systems of Assessments

A rich topic of conversation in competency-based schools is: How do we know if a student has learned? From the state policy perspective, systems of assessments are quality assurance mechanisms that ensure the entire system from classroom to state accountability are improving student learning through the provision of meaningful feedback. The questions driving the design of balanced systems of assessments are: Who should be assessed, why, when, how, and how often? How do we ensure the validity of the assessments? How is the information generated, recorded, shared, and used?

State leaders who are advancing competency education emphasize the importance of well-developed formative, interim, and summative assessments. However, state policy conversations often focus most heavily on summative assessments as the current operating policies are so misaligned with competency education. A number of key issues will need to be addressed, including the rigidity of schedules in the current state summative assessments being proposed by assessment consortium, as well as the continued practice of expecting students to take assessments for skills that they have not yet mastered. In discussions with state leaders, three features are often highlighted as critical elements of a competency-based state assessment system.

Validation: Summative assessments should be used to validate proficiency levels. Thus, students should participate in summative assessments only after their teacher has determined that they are ready to perform successfully. Students should not have to participate in summative assessments when they have not been exposed to the curriculum or received adequate support to help them reach proficiency.

Feedback Loops: Assessments should be meaningful to the student’s learning process. This means that assessments need to provide timely feedback to students about their strengths and weaknesses. They need to be able to use the feedback to enhance their learning so that they can be reassessed to demonstrate their knowledge and skills.

Multiple Points in the Year: Students should have timely opportunity to take summative assessments that are gateways to more advanced courses and then move on to the next levels of learning when ready. When not demonstrating proficiency on summative assessments, students should receive the help they need immediately and have multiple opportunities to demonstrate proficiency on the summative assessment.

The fourteen states in the Proficiency-Based Learning Task Force of the Smarter Balanced Assessment Consortium (SBAC) explored how a competency-based assessment system might be designed that can drive toward both higher achievement and equity. Task Force members identified the many characteristics of a powerful system of assessments. One idea discussed by the Task Force was the creation of state-level tests that placed students on a learning progression, rather than at a norm-referenced achievement level. If the state assessment systems could measure achievement on a continuum of learning, the dilemma of giving the test on a specific day disappears. To improve the design of the new assessment regimes, the Task Force recommended an increase of the number of assessments available in the interim assessments bank as they “have the capacity to provide a deeper level of diagnostic information that can be used to impact instructional practice. In addition, these assessments will provide early indications of student achievement that will later be measured through the summative assessments.”³⁰

MIXED SIGNALS: FEDERAL POLICY AND COMPETENCY EDUCATION

On one hand, it can be said that there is little in federal policy that is a barrier to competency education. On the other hand, there is also little in federal policy that supports it.

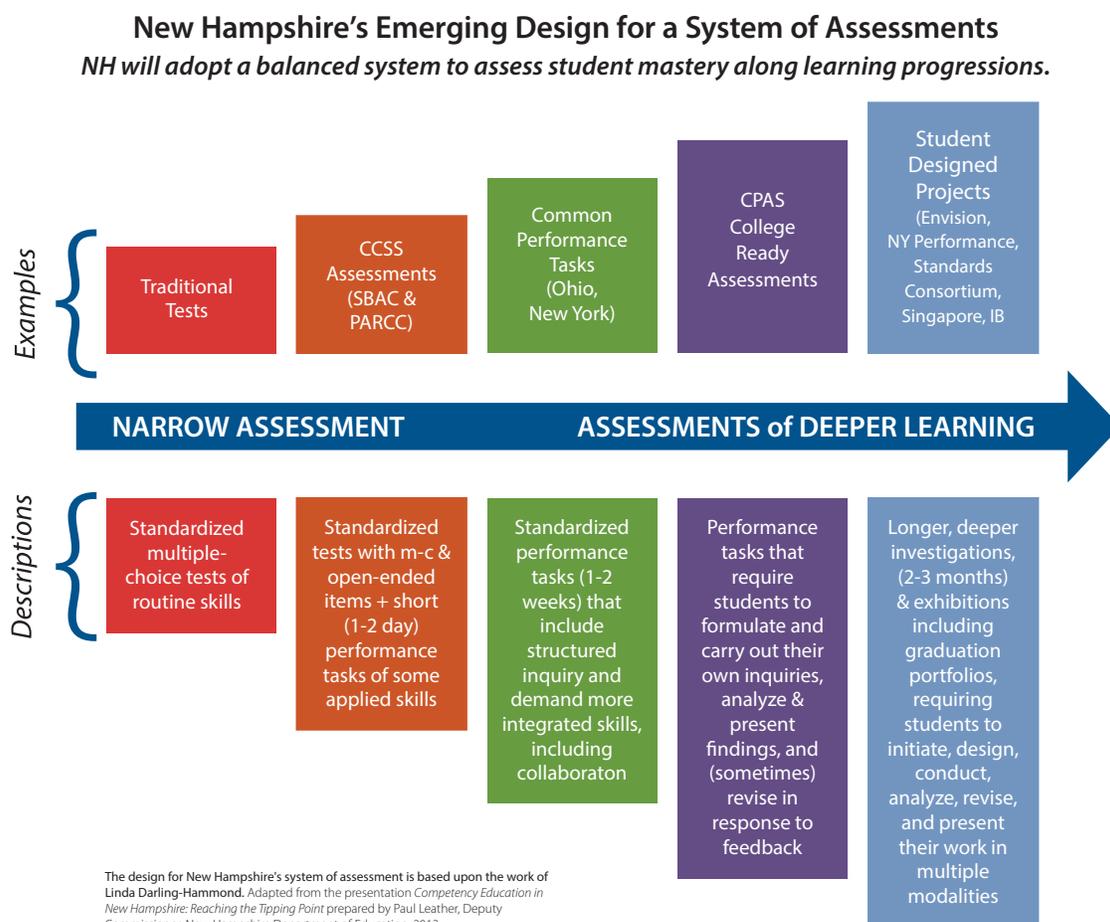
Certainly the majority of policies holding the traditional system in place are at the state level. Yet, the implementation of the Elementary and Secondary Education Act reinforces the time-based factory model of education.

- In the current system, state assessments are administered on the same day across the state, regardless of students’ levels of proficiency. In competency-based education, anywhere and anytime learning is supported by just-in-time assessments.
- The current system defines proficiency according to grade level where students are “on track” to graduate by 12th grade. In more flexible accountability systems, assessments are given on demand and respond to where students are on their learning progression.
- Traditional systems are not designed to get all students to graduation. In competency education, districts continue to provide education until students master the college- and career-readiness skills, even over-age and under-credited students who may need more time.

While the U.S. Department of Education emphasized personalized, mastery-based learning in the district Race to the Top competition, federal programs continue to rely on age-based cohorts and averaged grading through GPAs as a meaningful measure of student progress.

States are rethinking the structures for assessments that can serve as a powerful feedback loop to districts, schools, teachers, and students. Oregon has one of the most liberal state assessment systems, with a generous testing window that runs from early November to early May; online, self-leveling assessment that adjusts to student responses; and each student can test as often as three times with only the highest score counting. In addition, students who are accelerated in some content areas can be assessed on higher grade levels; however, since grade 11 is the critical testing year, all students test at grade level once they reach this point.

With the understanding that the Common Core State Standards assessments being developed by SBAC and the Partnership for Assessment of Readiness for College and Career are necessary but not sufficient in helping to define and assess the pathway to college and career readiness, states are making progress in putting the pieces together for a balanced system of assessments. In Ohio and New York, efforts are underway to create common performance tasks. In New Hampshire, the [emerging design for a comprehensive and balanced set of assessments](#) links learning goals to a student's progress in developing and demonstrating the knowledge, skills, and dispositions that are associated with success in college and career. These systems of assessments will also evaluate the development of higher-order skills that include problem solving, critical thinking, communication, and collaboration.



New Hampshire’s performance assessment system will balance “local control with statewide accountability and comparability.” In partnership with the [Center for Collaborative Education](#) (CCE) and the [National Center for the Improvement of Educational Assessment](#) (NCIEA), New Hampshire is designing performance tasks that include structured inquiry and application of more integrated skills, college-ready assessments in which students carry out their own inquiries and analysis, and student-designed projects that are deeper investigations. Common performance assessments will be shared and investments made in ensuring consistency in scoring across the state. Performance-based assessments will be administered when students are ready to demonstrate competency, as opposed to waiting for an arbitrary date on a calendar.³¹

CONSORTIUM PLUS

States pursuing competency-based systems are working hard to move away from a “teach to the test” mentality that narrows instructional focus, limits teachers’ ability to customize learning, and focuses students on shallower forms of learning. Implementation of Common Core State Standards with fidelity will require fundamental changes in teaching and learning, and states know that the nature of assessments for which people are held accountable is a strong influencer on curricular and instructional choices.

The Innovation Lab Network states are committed to statewide assessments as the anchor for a comprehensive system of assessments. The Consortium Plus initiative was formed to take their states’ systems beyond the consortia assessments with [EPIC](#), [SCOPE](#) and [SCALE](#).³² The Consortium Plus initiative will develop, pilot, and make available robust performance assessments that evaluate the application of knowledge and skills outlined by the Common Core standards—and standards in other fields—that some states feel cannot be assessed adequately by the two multi-state assessment consortia, PARCC and SBAC.

These assessments will be combined with the information from the Consortia assessments to make proficiency-based judgments about students’ abilities to apply their knowledge and skills to authentic, complex problems. The project will:

1. Develop a bank of prototype tasks and processes for use by participating states that evaluate Common Core State Standards requiring robust performance assessments.
2. Work with states and districts to develop and pilot tasks and assessment strategies to measure the identified standards, support professional development for teachers using the assessments, and build state and local capacity.
3. Support states as they develop a policy framework for integrating this wider array of assessment strategies into an overall system of assessments.

The Consortium Plus initiative will support the development and use of two types of tasks: standardized common tasks, and student-designed tasks evaluated with standardized rubrics. Finally, the project will enhance ways states can incorporate performance assessments into their policy agendas (e.g., graduation portfolios, performance components of end-of-course exams, and demonstrations of mastery for courses or programs).

Emerging Issues

There are four emerging and highly related issues that will take substantial creativity and determination to fully align with competency education: accountability, productivity metrics, information management systems, and school financing. Caution must be taken not to prematurely address these issues before we understand the implications of competency education in meeting the needs of traditionally underserved students. However, the conversations, explorations, and pilots are underway to build the necessary knowledge.

Accountability and Quality Assurance

Say the word accountability, and AYP or A–F state grades for schools jumps to mind. Our current system of accountability—driven largely by requirements and state responses to the federal No Child Left Behind legislation—has established our state assessments as the source of our primary accountability metric, with a narrow understanding of how the information can support teachers, principals, superintendents, SEAs, and federal policymakers to improve district and school performance.

The system does not need to be designed this way. First, using the core philosophy of competency education that progress in learning requires access to support, states are considering continuous improvement frameworks that provide feedback and support. New Hampshire’s redesign offers insights into the future of state accountability systems.

- In 2009, [SB 180](#) established a two-part accountability system: one input-based and the other performance-based. The first component assesses whether a school provides the necessary curriculum for an adequate education and sets appropriate expectations for completion of the academic program. The performance-based component assesses adequacy based on the school’s demonstration of student achievement, engagement, and persistence to graduation.
- The accountability system will be designed to move “away from branding schools through unproductive negative labeling process, and toward a process of providing meaningful supports that promote improvement and innovation.”³³ The [New Hampshire Education Networks](#) will be a large part of this system of supports.
- Student outcome data driving the accountability system will include a broad set of data including measures of growth based on competency-based models, performance tasks, and student surveys.

This is just the beginning though. In competency education, accountability is more likely to be thought of as a feedback loop with two important features of student learning: student pacing, and high levels of proficiency emphasizing deeper learning. State leaders caution that we are in the early days of redesigning an accountability system that is meaningful for parents, educators, and policymakers alike. The worst thing would be to jump too far ahead before enough districts and schools have worked through the implementation dilemmas.

Performance and Productivity³⁴

State and federal accountability models from 2001 through 2013 depended heavily on once-a-year, summative testing regimes. Although effective in dramatically increasing transparency about the inequity in our education systems, these snapshots are limited in measuring the learning gains of students or the performance of schools and districts.

Developing quality assurance processes that meet the needs of both accountability and continuous improvement will require us to develop metrics outside the techniques used in the past. It will be most important to come to terms with the differentiated responses to student learning based on where they start, pacing, depth of application, and achieving graduation. Because there are multiple opportunities for learning—including classroom instruction, blended, online, community experiences, and independent learning on the part of students—it will always be important to guard against patterns of inequity. Creating meaningful ways to measure “speed to competency” or rate of learning will provide insights into productivity. Ultimately, we want to determine the effectiveness of learning programs by measuring improvements in student learning outcomes. Cost-effectiveness will become a more important criterion than snapshots of inputs and outputs.

Information Management Infrastructure and Common Platforms³⁵

Although competency education has been in development for over a decade, it is the technological advances—digital learning and information systems—that are allowing it to flourish. Competency education generates enormous amounts of data on student learning that is best supported by an information system organized around student profiles. Yet, much of today’s information management infrastructure has been designed around top-down accountability and compliance policies. Almost all are time-based systems that are snapshots of student progress at a point in time.

It is not too soon to start redesigning information systems. Certainly, we should think carefully before continuing to invest in the data structures of current time-based systems. Most importantly, we need to relieve teachers of the burden of tracking student progress manually. Then educators must have access to the data and analysis to keep an eye on student pacing. Finally, meaningful analysis should be provided to monitor cost-effectiveness.

In general, states are leaving the decisions about information systems to districts. However, they won’t be able to do that for much longer. As competency education continues to advance, a tipping point will be reached when states will need to respond to the demand for portability, meaningful transcripts, and new ways to measure performance in accountability systems.

New Hampshire has started down this road with early efforts to enhance its state data system to better offer feedback to teachers and principals. One step in this process is to provide a more meaningful set of student outcome data including student growth based on state assessments, local measurements of 21st century skills, competency-based learning assessments, parent surveys, student voice evaluations, peer evaluations, and school culture surveys.³⁶

Financing Districts and Schools

One might think it is a logical step to move from proficiency-based credits to performance-based funding. However, caution is warranted. [Michigan is considering performance-based financing](#), and in the process is raising many of the issues related to it. First, it is too easy to confuse completion with performance. Second, until we know what it takes to support traditionally underserved students toward CCR, financial incentives for performance, even with weighted formulas, could create incentives for schools to serve some students and not others. Finally, operating a performance-based school is different from operating a performance-based system. Perhaps it is learning gains rather than standards met that we should be looking at to entice schools to seek the optimal models for helping student progress.

vi. Creating a Culture of Competency in State Education Agencies

Once a vision and direction has been set, SEA leaders immediately begin to see the limits of the organizational capacity of the SEA.

– Paul Leather, Deputy Commissioner, New Hampshire Department of Education

What does a culture of continuous improvement look like compared to a culture of compliance? How can the SEA develop a deep understanding of competency education when few, if any, of the staff have ever learned about or worked in a competency-based environment? How can federal funds be managed with their time-based, compliance tools in a way that enables the SEA to be a catalytic force for education transformation? These are some of the fundamental questions guiding SEA leaders as they make decisions large and small.

The core leadership role is to create a learning culture. This starts at the top. Chief State School Officers bear the largest responsibility for the transformation of the SEA organization and culture. Regardless of the level of detail being discussed, from strategy to review of timelines, every interaction is an opportunity to create a learning culture. Commissioners have to be prepared for pushing forward, even when results are not immediate or implementation slows down in the face of complexity or competing priorities.³⁷ Yet, commissioners and state superintendents have a limited time span due to the political nature of their jobs. Thus, deputies within the SEA play a critical role with their in depth understanding of the organization, policy, and practice, while also positioned to sustain the initiative. Below are a few examples of ways in which chief state school officers and their deputies are transforming their organizations.

Serving Districts and Schools

As in Maine, many SEAs are reorganizing to become a service agency rather than one driven by regulation and compliance. This is a dramatic shift that impacts strategic directions and staff roles. One of the first challenges to overcome is the organizational and programmatic silos that shape SEAs. In a culture of compliance, organizational rigidity is reinforced. In a service agency, silos are unacceptable. Maine has started cross-training SEA staff to customize intervention at the school administrative unit level. They are also taking the opportunity to rethink its support for schools by integrating its reorganization activities with personnel from both the School Improvement/Accountability and the Maine Learning Technology Initiative divisions.

Deconstruction, Contracting, and Reconstruction

Staff who have spent their careers managing compliance to federal- and state-funded programs may find the white space of “building the plane while flying” overwhelming. There is a risk that they can actually undermine the efforts by introducing compliance mentality and mechanisms when what is needed is adaptive leadership. Given the simultaneity of systemic change in which multiple capacities in the system have to be transformed—embedding competency-based practices where once time-based structures resided—SEA managers must be collaborative and willing to work together to align policies and procedures within the new framework of

the personalized, competency-based model. And if they are not, commissioners will need to deconstruct the SEA and tolerate vacancies in positions until the right people have been found. By contracting out services to organizations that have exactly the capacity the SEA needs to design elements of the system or facilitate the design process, commissioners can maintain steady progress while also building capacity. Everything is a learning opportunity.

For example, as described above, New Hampshire has contracted with the [Center for Collaborative Education](#) and the [National Center for the Improvement of Educational Assessment](#) to design a system for performance-based assessment. To facilitate the innovation and knowledge networks that form the core of their change strategy, the New Hampshire Department of Education contracted with 2Revolutions and other providers, introducing a broad swath of experience and perspectives.

Commissioners should always watch for the right leadership to embrace and inculcate the culture of innovation and improvement. Competency education is too new for there to be a large pool of people with a wealth of experience. Thus, SEA leaders need to be on the lookout for personnel who can offer a growth mindset, vision, adaptive leadership styles, and attention to details. It helps to find people in key positions who have experience in some element of competency education, whether that is standards-based grading or blended learning. Most importantly, they must look for leaders who understand that the work is from the ground up, with the job of the SEA to support districts and schools, not direct them.

In a proficiency system, failure or poor performance may be part of the student's learning curve, but it is not an outcome.

– Proficiency-Based Instruction and Assessment, Oregon Education Roundtable

Structuring for Change

Commissioners need to be cautious about the decision to reorganize the SEA. If done without strategic value, it can create churn rather than change. However, it can be an opportunity to invigorate SEA staff to find connections across programmatic silos. In an effort to move from a culture of compliance to a culture of continuous improvement, the Iowa Department of Education has redesigned the bureaus within the division of Learning and Results to align the work with key drivers of education reform: educator quality, standards and curriculum, learner strategies and supports, and comprehensive school improvement. In Colorado, the Department of Education created the [Innovation, Choice and Engagement Division](#), overseeing online and blended learning and charter and innovation schools. New Hampshire has restructured the Department of Education with a flattened structure to encourage collaboration and cross-departmental innovation.

SEA leaders emphasize that although there are some quick and easy ways to build capacity by putting the right people into key positions, larger organizational changes should be done carefully and strategically to produce significant value. Otherwise, you may fritter away the “capital” for change that has been built in setting a vision.

vii. Closing Comments

From compliance officers to visionary partners, state education leaders are redefining their roles in designing next generation learning. Every aspect of state policy becomes a lever for change: assuming the duty of removing barriers to competency education, creating conditions for district and school innovation, designing thoughtful assessment regimes to ensure quality across schools, and creating flexibility to support student learning.

The greatest challenge facing all of the SEAs that are guiding our country's transformation to competency education and a personalized model of learning is in supporting districts and schools in implementation. There is nothing more important than effective implementation to lifting up the education system and generating equity in student achievement. There are no ready-made road maps. The demand on local education leaders is extraordinary as they engage practitioners and communities in making design choices. There are many opportunities for missteps and delays; however, there are equally as many opportunities for creativity, leadership, and a shared joy of learning.

States, districts, and schools will be working together in a continual process of innovation and improvement. Partnering with districts and schools, the SEA takes on the leadership roles of facilitators, collaborators, and co-creators for restructuring our educational system. Most importantly, state leaders will need to tackle complex issues as districts and schools identify barriers or misalignment in the system.

We don't know what competency education will look like in ten years, especially with the rapid advancements in digital learning we are seeing. What we do know is that the dialog needs to go both ways to redesign systems toward transformation and to create conditions necessary for student success. If we are to align the systems for student-centered learning, state policymakers must listen to the practitioners who are designing the systems we need and must be strong advocates for necessary changes in state and federal policy as well.



For more information on competency education, you can visit [CompetencyWorks](#), read previous issue briefs on the topic, or visit the [Competency-Based Pathways wiki](#) for an in-depth look at the working definition.

Endnotes

- ¹ ["State Strategies for Awarding Credit to Support Student Learning,"](#) National Governors Association, 2011.
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- ⁴ This definition was developed at the Competency-Based Summit co-sponsored by the International Association for K-12 Online Learning (iNACOL) and the Council of Chief State School Officers (CCSSO) in 2010.
- ⁵ Final report of the Proficiency-Based Learning Task Force, Smarter Balanced Assessment Consortium, October 11, 2012. [Available at the Competency-Based Pathways Wiki.](#)
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- ¹³ See Fred Bramante and Rose Colby's book *Off the Clock: Moving Education from Time to Competency* (Thousand Oaks, CA: Corwin, 2012) for an in-depth description of New Hampshire's journey.
- ¹⁴ [Regional Possibilities,](#) Maine Department of Education Center for Best Practices, 2013.
- ¹⁵ Presentation of ["New Hampshire—The New Ways We Are Thinking about Learning"](#) at the NH Innovation Lab Network Partnership for Next Generation Learning meeting, October 27, 2011. Web. February 2013. [http://www.education.nh.gov/innovations/nxgl/.](http://www.education.nh.gov/innovations/nxgl/)

¹⁶ “Building a Culture of R & D in Government.” Stacey Gillett, Project on Social Innovation, Harvard University. Web. February 2013. <http://socialinnovation.ash.harvard.edu/building-a-culture-of-rd-in-government>.

¹⁷ Interview with Diane Smith, Teaching & Learning Initiative Director, Business Education Compact, February 2013.

¹⁸ “Cracking the Code: Synchronizing Policy and Practice for Performance-Based Learning” by Patrick and Sturgis, July 2011. Web. <http://www.competencyworks.org/resources/briefing-papers/>.

¹⁹ Superintendent’s Update #337. Web. February 2013. <http://www.ode.state.or.us/news/announcements/announcement.aspx?ID=7097>.

²⁰ See “[The Shift from Cohorts to Competency](#),” a briefing paper produced by Digital Learning Now, for more information on new capacities that will be developed in competency education.

²¹ Salman Khan introduces the phrase “Swiss cheese learning” in his book *The One World Schoolhouse* as a metaphor for the gaps in learning that develop for both high-achieving and struggling students.

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²⁷ “[Oregon Framework for Teacher and Administrator Evaluation and Support Systems](#),” July 2012 (Revised 2013–2014 timeline, January 2013). Endorsed by the Oregon State Board of Education on June 28, 2012, Oregon Department of Education.

²⁸ “Improving the Academic Achievement of the Disadvantaged; Final Rule” 34 CFR 200.19(b). www2.ed.gov.

²⁹ For more on this topic, see “[The Learning Edge: Supporting Student Success in a Competency-Based Learning Environment](#),” CompetencyWorks.

³⁰ Final report of the Proficiency-Based Learning Task Force, Smarter Balanced Assessment Consortium, October 11, 2012.

³¹ [New Hampshire ESEA Flexibility Request](#)

³² EPIC is the [Educational Policy Improvement Center](#); SCOPE is the Stanford Center for Opportunity Policy in Education, and SCALE is the Stanford Center for Assessment, Learning, and Equity.

³³ [New Hampshire ESEA Flexibility Request](#), p. 42.

³⁴ [“Creating Student Learning Performance Metrics and Quality Assurance for Online Schools,”](#) International Association for K-12 Online Learning, 2012. http://www.inacol.org/research/docs/iNACOL_Quality_Metrics.pdf.

³⁵ For more information on this topic, see [“Re-Engineering Information Technology: Design Considerations for Competency Education”](#) by Liz Glowa and Susan Patrick, CompetencyWorks, 2013. <http://www.competencyworks.org>.

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