It's Not a Matter of Time:

Highlights from the 2011
Competency-Based Learning Summit

Written by:

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This is one of two reports from the Competency-Based Learning Summit. See *Cracking the Code: Synchronizing Policy and Practice for Performance-Based Learning* for a deeper discussion on state policy issues.

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Introduction

From Anchorage, Alaska, to Orlando, Florida, and from Gray, Maine, to Yuma, Arizona, one hundred competency-based innovators gathered at the Competency-Based Learning Summit in March 2011. Sponsored by the Council of Chief State School Officers (CCSSO) and the International Association for K–12 Online Learning (iNACOL), the Summit was developed in response to the findings in the report "When Success Is the Only Option: Designing Competency-Based Pathways for Next Generation Learning." The 2010 scan of the field of competency-based innovation found that the pockets of innovation across the country were too often operating in general isolation. By bringing together the leaders in the field, CCSSO and iNACOL set out to expedite building the capacity to meet the growing demand for competency-based approaches.

The Summit, the first step toward building the infrastructure to expedite competency-based approaches, was designed around three goals:

- Sharing expertise across and among innovators and policy leaders

- Building a common working definition of competency-based learning

- Enhancing the strategies and skills for advancing the establishment of competency-based options

Although it would be impossible to capture the Summit's cascade of ideas, this paper highlights the key issues raised to support the advancement of competency-based learning. A complementary paper, "Cracking the Code: Synchronizing Policy and Practice for Performance-Based Learning," provides a more in-depth look at the state policy issues discussed at the Summit.

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

A Note on Language

Several terms are used to describe competency-based learning, including performance-based, proficiency-based, and standards-based. Competency-based will be used in this paper because federal policy has incorporated the term in Race to the Top and other programs. However, in describing reform efforts, the terms used by the state or district will be used. The hope is that as long as a shared working definition is used to drive policy, the variations in the descriptive term will not be a barrier.

What Is Competency-Based Learning?

> *Students have been locked down by the concept of seat-time and locked out of the technological revolution that has transformed nearly every sector of American society, except for education.*
>
> – Jim Shelton, Assistant Deputy Secretary of Education

Competency-based learning is not simply the elimination of seat-time. In fact, eliminating it without replacing it with something else may increase inequities. The time-based system must be replaced with a learning-based or competency-based system that is fully aligned with students and what they need to educationally progress.

In "When Success Is the Only Option: Designing Competency-Based Pathways for Next Generation Learning," a working definition was proposed to guide the development of policies and practice. This is particularly important as the language varies among states, districts, and schools and includes "proficiency-" and "performance-based learning." Summit participants strengthened the working definition to describe a high-quality competency-based system. The following is the revised working definition of competency-based learning approaches:

- 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.[1]

Competency-based efforts are certainly not a silver bullet; only high-quality implementation will produce meaningful results. All five components of the definition need to be successfully implemented to ensure equity and excellence.

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[1] Competency-based innovators design two sets of competencies: academic and skills that students need for college and career preparation. Using different terms, innovators all include forms of applied learning competencies such as creativity, problem solving, and communication. Many include personal skills such as perseverance, cultural competency, and study skills. Those serving vulnerable students include social-emotional literacy and navigational skills that are particularly important for students from low-income communities.

The conversations at the Summit were not based on competency-based issues alone. Other concepts swept through the discussions, including student-centered, student co-design, anytime, everywhere learning opportunities, and the rapidly evolving digital learning tools. As innovations and policies emerge, it is important to remember that competency-based education is highly related but not exactly the same as other elements of next generation learning. Each of the concepts can be implemented independently of each other. For example, competency-based practices can be used in classrooms without access to computer-based instruction or online learning. Teachers can design curriculum that is based on state standards without attention to student agency. However, learning is so much more powerful when it is personalized, individualized, and draws on expanded learning opportunities with 24/7 online learning and real-world experiences.

> *A competency-based system is one in which students advance upon mastery of essential skills and knowledge without regard to time or place.*
>
> – from small group discussions at the Summit

Next Generation Learning

Competency-based learning is often included in discussions about next generation learning models. This is much more than expanded use of digital tools. Working in partnership with seven states, the Council of Chief State School Officers has defined Next Generation Learning as rooted in six critical attributes, or essential conditions:

- **Personalizing learning**, which calls for a data-driven framework to set goals, assess progress, and ensure students receive the academic and developmental supports they need;

- **Comprehensive systems of learning supports**, which addresses social, emotional, physical, and cognitive development along a continuum of services to ensure the success of all students;

- **World-class knowledge and skills,** which require achievement goals to sufficiently encompass the content knowledge and skills required for success in a globally-oriented world;

- **Performance-based learning**, which puts students at the center of the learning process by enabling the demonstration of mastery based on high, clear, and commonly-shared expectations;

- **Anytime, everywhere opportunities**, which provide constructive learning experiences in all aspects of a child's life, through both the geographic and the Internet-connected community; and

- **Authentic student voice**, which is the deep engagement of students in directing and owning their individual learning and shaping the nature of the education experience among their peers.

Time and Timing:
Deconstructing the Time-Based System

Time. It was part of every conversation throughout the Summit. As innovators explored more deeply what a learning-based system could look like, it became clearer exactly how assumptions about time and timing shape our education system. Here are some examples of how a competency-based system might think about time and timing differently.

- **Timing Designed Around Student Needs:** Those who need more time get it. Students who want more time to accelerate learning get it. This means that learning does not stop at the end of the school day, school week, or semester. Students can complete courses at any time during the school year.

> *It's a problem when policy communicates that learning starts in September and ends in June. We have to be thinking about year-round learning for kids. That doesn't mean that a kid is in school all year round. It means that we support students learning all year round.*
>
> — Fred Bramante, New Hampshire Board of Education

- **Students Are Provided Supports They Need, When They Need It:** The focus shifts to unit recovery, rapidly supporting students when they are not grasping a specific learning objective, rather than credit recovery after a student has failed an entire semester. Schools no longer need to bear the cost of students repeating entire courses.

- **Students Always Have the Opportunity for Mastery:** In the current system, grade point averages reflect an accumulation of achievement at different points in time. In a competency-based system, students always have the chance to build mastery. New metrics capturing the rate of learning reflect student perseverance, school effectiveness, and opportunities to learn outside of school.

- **Students Attain Mastery Before Summative Assessment:** Students are assessed after they have mastered skills, not before. All summative tests, whether course-based or state accountability exams, are delivered when students are proficient, serving as a mechanism to ensure consistency of standards.

- **Student Learning Drives Decisions:** Learning, rather than time, becomes the basis of determining job structures, scheduling, resource allocation, and budgets.

And last, but not least…

- **Pacing Matters:** Pacing guides are a mechanism to ensure that students are getting the support they need, not simply moving through a curriculum over a period of time. Competency-based means that students who are struggling do not fall further behind. Principals and educators keep an eye on students' pace in learning, using it as an opportunity to support effective instruction, engage parents, and allocate resources.

What does this all mean? Bror Saxberg, Chief Learning Officer of Kaplan, Inc., shared his vision for how the combination of these changes can become the education system of the future.

What does competency-based flexibility really look like? Kids with different start and ending dates for courses; kids who are slower in some courses, faster in others; kids in online, hybrid, and classroom environments for different parts of the day; kids doing internships tied to learning outcomes (augmented with online homework to drive home conceptual and skill pieces tied to their daily internship experiences), etc.

What, then, is the interest of parents, employers, administrators, and ultimately the state in understanding how mastery is developing in this newly fluid environment? It's like a freeway for cars, or a roundabout, where the cars may be moving at different speeds, and entering and leaving at speed, rather than lots of stoplights gating the flow of traffic. You now need monitoring stations and data about flow and speed, with flags popping up when cars are stalled or moving too slowly (on an autobahn, safely moving fast is okay, too!). Your accountability "war room" is providing daily updates, with accumulating data about teachers, learning environments, internships, specific courses, comparing average rates of progress for cohorts of similar kids in one environment with rates of progress for the same kinds of kids in another; as the data accumulate to show a learning experience is going badly compared to how it should go, either for a cohort or an individual, flares should go up to visit/coach/intervene/replace/support. A hard objective is being hit every week by large numbers of students, not just once a year—you can generate evidence about what works for mastering it (and what doesn't) as fast as you can think, not just once per year.

All of this depends, then, critically on high-quality (ideally, embedded within activities) data flow on learning within the learning environments. This means formative assessment, not just summative assessment, has to be developed professionally, separately, and carefully validated—waiting for end-of-year results is way too long, and damaging to individuals and groups. It would be like counting dents on cars at the off-ramps of freeways, instead of monitoring the conditions actually on the road in real time.

This means every state commissioner should wind up with an interactive map in his or her office, just like the folks running transit systems, color-coded to show all the experiences' and environments' learning status for students, every week—possibly every day, in some cases. Which innovations about mastering fraction equivalence are doing the best in your state THIS WEEK?

Most importantly, a competency-based system embraces student learning above all other social values. It operates on a new value proposition: By aligning all of our resources (in schools, the community, and online) around student learning to enable students to progress upon mastery, our country can increase productivity in the education system, while simultaneously raising achievement levels overall and reducing the achievement gap. This is an enormous cultural change after hundreds of years of our current assumptions of time, timing and tracking, A-F grades, age-based grouping, and 180-day school years.

Getting Started

Conversations flourished throughout the Summit on lessons learned about competency-based school designs and reforms. The following section describes key points in the discussion.

Identifying Innovation Space: Autonomy and Non-Consumption

Many of the competency-based school developers took advantage of the policy reforms promoting autonomy to build their models, often relying on creativity to navigate the current policy environment. School leaders shared a number of techniques they have used to operate competency-based approaches within a time-based system.

- New Hampshire eliminated seat-time and embedded competency-based learning within redefined course structures.

- Diploma Plus and Big Picture Learning schools created crosswalks between their competencies and state standards.

- Some Asia Society schools use a two-diploma structure: the first represents the district's requirements, and the second represents the global education competencies.

Competency-based education is not by definition a disruptive innovation because it is not a specific product or service. However, it certainly is disruptive when creating opportunities to challenge long-held practices that are constraining education reform. Building upon the theories of Clayton Christensen,[2] innovators and policymakers should seek out areas of non-consumption in public education as this is where competency-based approaches can thrive. Participants mentioned a number of areas of non-consumption or under-consumption where competency-based practices are or could make inroads.

- **Alternative Education:** Schools serving over-age, under-credited students are also a place where competency-based learning is taking root. Diploma Plus and Youth Connections Virtual School are expediting student learning for those most at risk of aging-out of the K–12 system.

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2   Clayton Christensen et al., *Disrupting Class: How Disruptive Innovation Will Change the Way the World Learns* (New York: McGraw-Hill, 2008).

- **Home and Hospital:** Students with illnesses at home or in a hospital have benefited from competency-based pathways.

- **Credit Recovery:** There has been a rapid expansion of credit recovery courses using technology. Students simply demonstrate that they have mastered the material without regard to how much time it took them.

- **Insufficient Supply or Distribution Problems:** Online courses can help address teacher shortage issues such as serving students where a course is otherwise unavailable or where there are insufficient teachers in any given content area.

- **Students with High Mobility:** Competency-based approaches can enhance educational continuity. Children in military families and those that are homeless or in foster care endure high rates of school transfer. Students with responsibilities to their families or communities require flexibility. Students placed into disciplinary education or juvenile detention require portable competency-based approaches so that they do not fall further and further behind.

Michael Horn noted, "The budget crisis is increasing areas of non-consumption where you have to reach for other solutions. The nature and depth of the crises will create a spark for innovative solutions that look at reformulating how to deliver education at a much higher productivity level. So what the states have to do is create the space as solutions are introduced."

Transforming the Current System from Within

Although the theories of disruptive innovation suggest that it cannot be expected for a monopolistic public system to be able to transform itself (described graphically as self-cannibalization by Michael Horn), the policy leaders at the Summit believe it intolerable to suggest otherwise. Simply put, the health of our families, communities, economy, and national security depend on finding a way to bring about comprehensive transformation.

The rapid transformation of the Chugach School District in Alaska has taken hold of the imagination of many educational leaders. By implementing a competency-based approach, this tremendously impoverished rural district produced sky-rocketing achievement gains. Within five years, Chugach School district saw the following results:[3]

- Over a five-year period, average student achievement on the California Achievement Test rose from the bottom quartile to the 72nd percentile.

- The percentage of students participating in college entrance exams rose from 0 percent to more than 70 percent by 2000.

- Between 1995 and 2000, teacher turnover was reduced to 12 percent; in the previous twenty-year history of the district, turnover was 55 percent yearly.

Furthermore, after three years of implementation, teachers valued the approach so highly that they requested that student achievement be included in their performance evaluations.

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[3]   Richard A. DeLorenzo et al., *Delivering on the Promise: The Education Revolution* (Bloomington, IN: Solution Tree Press, 2009).

Below are updates from many of the innovative districts and states valiantly advancing competency-based learning. For more information on the efforts of states, please read "Cracking the Code: Synchronizing Policy and Practice for Performance-Based Learning."

Lindsay Unified School District: Building a Strategic Design for Performance-Based Learning

Lindsay Unified is located in the central San Joaquin Valley in the state of California and serves just over 4,000 students from Kindergarten to grade 12. The district has a large Hispanic/Latino (89.8%), socio-economically disadvantaged (75.0 %), English Language Learner (52.4%), and migrant (28.6%) population. Lindsay is in an agricultural area where many residents are employed in farm labor. Most residents speak Spanish at home, and the average adult education level is fifth grade. After many years of low achievement, the district recognized that it could not dramatically improve achievement within the constraints of the traditional system. Thus, the LUSD partnered with Schwahn Leadership Associates, Marzano Research Laboratory, and the Reinventing Schools Coalition to shape a performance-based educational system that would transform the way schooling is done in LUSD.

Tom Rooney, Assistant Superintendent of Curriculum and Instruction, described LUSD's journey to a performance-based system. The first step was to create a District Strategic Design that was owned by all stakeholders and would serve as the foundation for transforming the district into a high-performing, performance-based system. During a district-wide community meeting in May 2007, it was discovered that all stakeholders essentially wanted the same thing for their children. With community support, LUSD developed a set of guiding principles that included the belief that students learn in different ways and in different time frames. Immediately the question was raised: Why doesn't our education system honor this basic principle about how and when our children learn?

Working with the teachers, administration, students, and parents from different income levels, a set of lifelong learning standards were developed that describe the Lindsay graduate as a person who in difficult situations sets personal goals,

Guiding Principles about Students and Learning

All students can learn.

Students learn in different ways and time frames.

Successful learning breeds continued success which influences esteem, attitude, and motivation.

Mistakes are inherent in the learning process.

Learning and curiosity are basic human drives.

Student learning requires positive and validating relationships with teachers.

Student learning is enhanced by meaningful, real-life experiences requiring complex thinking.

Learning is fun.

Student learning is fostered by frequent, formative feedback.

Student learning is future-focused.

– Lindsay Unified School District

monitors their own progress, is a globally responsible citizen, and embraces the power of cultural diversity. The district developed academic units of study in all content areas in K–12 that clearly defined the knowledge and skills required of Lindsay learners. These units of study, referred to as Measurement Topics, were developed in consultation with Marzano Research Laboratory and were fully implemented in the fall of 2009. The LUSD Measurement Topics are based on the California state standards and are supported by a comprehensive assessment system using multiple measures so that the LUSD learning community can "guarantee" what learners will know and be able to do before graduating from Lindsay High School.

The decision to roll out a performance-based system first at Lindsay High School in the fall of 2009 was based on the fact that the principal of that school fully embraced the vision of performance-based education and was ready to take on the leadership responsibilities. The performance-based system was introduced to the incoming ninth grade class of that school year and learners in that class were required to demonstrate specific competencies in each unit of study prior to advancing to the next unit. Initially, students liked the idea of "learning at their own pace," but many students realized in April 2010 that the school was serious about having them demonstrate competencies, and there was a "mass scramble" to demonstrate mastery near the end of that year. After the first year, over one quarter of the ninth graders failed to complete the required competencies; they were required to begin their sophomore year where they left off when their freshman year ended. By this time, the learners began to understand the performance-based system and the rigorous learning that was now expected of them. LUSD has rolled out the standards-based approach using the accordion method, introducing it in seventh grade and rolling it up to the tenth grade in the fall of 2010, with plans for having a K–11 performance-based system in place by the fall of 2011.

Rooney cautioned participants that they had to be ready to "blow out the norms of the master schedule at the secondary level." In order to be responsive to learner needs, a school would have to "reshuffle students throughout the year. Some will work independently, some electronically, some with a teacher. Sometimes it requires organizing students homogenously by level." Online learning can provide the flexibility to students that need remediation or want to move ahead.

Although it has only been one year, Lindsay High School had the highest growth among all the schools in the district with an impressive 45-point Academic Performance Index (API) gain. The highest performing students were the ninth graders, the same learners who engaged in performance-based education. Preliminary and non-public results from the Spring 2011 census assessment for all tenth graders shows that Lindsay High School will have a second year of high academic gains, far exceeding the 45-point gain in 2010. As LUSD continues to roll out the approach, more data will be generated, providing a better understanding of the dynamics of a true performance-based system.

New York City: Creating Innovation Space

The New York City Department of Education (NYCDOE) has launched an ambitious effort to move its schools toward more student-centered, personalized learning models through its Innovation Zone (iZone). The iZone will include 160 schools this year that have committed to organizing their curriculum, instruction, staffing, scheduling, and resources around the needs, motivations, and strengths of individual students.

Arthur VanderVeen, CEO of the NYCDOE Office of Innovation, explained that the initiative is building on the creative energies of innovative schools that have been personalizing learning for years but have lacked the organized support, policy flexibility, and access to new technologies that are critical to rethinking traditional school structures in order to build schools that are student-centered, personalized, and engaging students in meaningful, rigorous learning.

iZone Design Principles

Globally Competitive Standards

Personalized Learning Plans

New Staff and Student Roles

Competency-Based Learning and Assessment

Multiple Learning Modalities

– New York City iZone

iZone schools are drawing on the support of partners with experience in personalizing learning. Three partners—New Tech Network, Reinventing Schools Coalition, and Kunskapsskolan—are facilitating the schools' work to envision a future state design aligned to the five design principles, develop a three-year roadmap, analyze capacity needs, and develop implementation and professional development plans. School designs include online and blended learning, an emphasis on developing higher-order thinking skills through performance-based assessment, project-based learning, the use of e-portfolios, competency-based grading, strong advisory models focused on personalized learning plans, and flexible, student-centered scheduling.

NYCDOE has been working with the New York State Education Department to develop new policy proposals concerning seat-time and competency-based credit. It has also been working the United Federation of Teachers to increase scheduling flexibility and explore new teacher licenses related to online and blended teaching roles.

New Hampshire: Boldly Going Where No One Has Gone Before

New Hampshire is leading the way by replacing seat-time with competency-based policies. It has kept the course structure, requiring students to master competencies to get credits. They have simultaneously increased expanded-learning opportunities so that students have more options for how they can build and apply skills. New Hampshire learned that enabling policy is insufficient: the initial policy provided districts with alternative options but virtually no districts took advantage of the flexibility. New Hampshire did not see substantial innovation until they required all schools to offer competency-based credits and provided regional supports to districts and schools.

New Hampshire's Virtual Learning Academy Charter School (VLACS) is a statewide, competency-based virtual school designed to provide all students with a personalized education. Currently, the school has over 10,000 enrollments that span grades 6 through 12, including Advanced Placement, dual-credit high school, and college courses. VLACS provides students with the ultimate in flexibility as students may enroll in courses at any time and complete coursework at a pace that matches their needs. The school moved to a competency-based approach earlier this year and now offers competency recovery, competency-based courses, and experiential learning opportunities (ELOs). ELOs are blended online courses where students meet many course competencies through internships or other workplace experiences and complete the remaining course competencies online. Student progress is measured by the completion of competencies and not through traditional attendance-based measures. The method for determining state aid also supports the competency-based model as the school earns funding based on the percentage of course completion of each student.

Oregon: Piloting Their Way to Proficiency

Oregon introduced enabling policies for proficiency-based credit in 2003. The strategy allowed both a proficiency-based system and a time-based system to operate in tandem without disrupting the financial model that is aligned with units of instruction based on seat-time. Similar to the experience in New Hampshire, districts and schools rarely took advantage to innovate. Options to the seat-time funding model developed during implementation of a 2005 statute enabling students sixteen years of age or older to attend public post-secondary institutions while still enrolled in their local school district. As a result, more out-of-class proficiency options have surfaced.

A seven-district pilot provided additional input from the field on implementation, resulting in a State Board of Education Task Force as a part of Oregon diploma revisions in 2008. In 2009, the Board approved policy revisions, and additional school districts have initiated various stages of implementation. In 2009, the Oregon Proficiency Project began with two pilot sites exploring proficiency-based approaches. Statewide, nearly 2,000 teachers and administrators have participated in professional development for proficiency-based instruction through a partnership with the Business Education Compact. With increased knowledge, the state is now exploring several policy issues that will increase the likelihood of proficiency-based approaches being adopted, including changes to grading and reporting rules, influencing teacher and administrator training to include proficiency-based instruction, and streamlining K–12 and higher-education funding so that students can accelerate their learning while still in high school.

Alabama: Combining Initiatives into a Transformational Strategy

Deputy State Superintendent Tommy Bice described Alabama's process of drawing together online learning, credit recovery, and accelerated learning into a cohesive approach to transform the education system.

In 2005, Alabama's online learning initiative, ACCESS, was launched. By 2009, it was contributing to Alabama's significant gains in Advanced Placement (24% gains compared to 7% nationally). That same year, the system became statewide with all students having access to online learning.

In 2008, the Board of Education passed FIRST CHOICE, the Advanced Academic Endorsement to the Alabama High School Diploma. FIRST CHOICE is the default diploma for all entering ninth graders, beginning with the ninth grade class of 2008–2009, which includes a minimum requirement of Algebra II with Trigonometry, two years of a foreign language, and an online experience. To support FIRST CHOICE, academic tools are being implemented to help guide students through their high school careers with the most efficient use of time and ability, including:

- Credit recovery

- Credit advancement

- Graduation coaches

- Support systems for struggling students (PASS)

Credit recovery and credit advancement are both policies enabling competency-based credits. Starting in the 2009–2010 school year, students can take advantage of competency-based credits. Similar to other states, districts are hesitant to move forward on competency-based credits without further guidance from the state.

Tough Issues

> *We have to stop thinking in terms of courses and time because it really is about individual students and what it takes them to get through. What's unacceptable at my schools is if students are not provided with supports.*
>
> – Ginger Blackmon, Highland Tech High

Throughout the Summit, a number of tough issues were raised—issues that did not have a simple solution or even enough understanding of the landscape to seek a resolution. Many of these emerging issues are substantive. However, several were process issues, including synchronizing policy and practice, communication, and engaging critical partners.

Throughout the conversations, there was a constant reiteration that in order to ensure an effective and equitable competency-based system, students need to be put first and approached as customers. This requires aligning the system with 100% of the students, even those who may fall behind, fall off the track to graduation, or "stop out." It requires the districts and schools to design around the educational needs (both academic and lifelong learning) of their students.

Accountability: Putting the Customer First

With the introduction of accountability as a critical element of education reform, our country has come to understand it as a top-down dynamic. The federal government holds the state accountable, the state holds districts, the districts hold schools, schools hold teachers, and teachers hold students.

Yet, there is another way to think about it: we can think of students as customers. Accountability becomes quality management, and accountability systems become continuous improvement systems. Many of the conversations at the Summit veered into what can become possible once technologies are in place to increase the viability of this type of accountability model.

- The tools for learning become more important than ever. Validity of the assessment instruments is critical; if we don't trust the validity, then the entire system is questioned. Teachers and students will need access to a rich set of learning tasks and assessment rubrics

so that students can demonstrate that they have mastered a learning topic. Rubrics and consistent scales are a critical step in the development of high-quality, performance-based assessments. In addition, the mastery we are measuring must be transferable into other learning environments.[4]

- Mastery becomes the trigger for summative assessment, rather than the tests taking place at an arbitrary point on a calendar.

- Pace matters. In fact, pace becomes the mechanism to ensure that students are getting the supports they need. If students are not moving forward within a pace range, it is an indication that they are not getting served, served well enough, or that there are deeper issues that must be addressed. Falling off pace becomes the indicator for principal or district intervention with teachers and/or students.

- Adaptive online learning begins to play a vital role. The information on student learning— such as where they are having problems or where they need help—is invaluable. In addition, it serves as a validator in maintaining consistency in the understanding of proficiency across teachers and schools.

There were many questions about how to create prototypes of an accountability system designed to promote student learning, especially within the current policy framework.

Equity: Eliminating Our Tolerance for Inequality

Participants pointed out that the United States is producing the greatest inequalities to date, while we continue to propose that we are moving toward equality. Others raised the point that our country has a very high tolerance for inequality. Thus, as competency-based innovations and enabling policy conditions expand, equity must become an essential lens. To do otherwise runs the risk of reproducing the inequities of the time-based system.

Several aspects of ensuring equity were raised in conversations.

- One of the concerns rippling throughout the Summit was that a personalized, competency-based approach may result in some students being left behind or an increase in the achievement gap. Judy Jeffries from the Partnership for Next Generation Learning described the problem: "If we're not careful, we'll create more inequities in the system then we currently have. We must rethink the interventions and supports rather than just saying we need more time." Bror Saxberg expanded on this point—"Pace matters!"—with the suggestion that the goal should be to put students on their fastest path to results that matter. He suggested that as information systems develop in sophistication, data will drive an increasing rate of progression—students, teachers, and administrators should be, and can be, in a hurry.

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[4]   EdSteps, a new web-based resource, is now available for measuring student growth. Developed by the Council of Chief State School Officers, the centerpiece is a public library of student work samples in key skill areas, including writing, global competence, creativity, problem-solving, and analyzing information. Student work is presented in a continuum—a gradual progression—from emerging to accomplished work or another searchable format. EdSteps will allow teachers, parents, and students themselves to measure individual students' progress over time and answer questions about whether students are on track to success. The work samples will help answer a central question for student growth: Where is a particular student now, and what should he or she do to improve? www.EdSteps.org

- Although a problem in the time-based system as well as a competency-based approach, ensuring consistency in academic standards for all students and across schools, districts, and states is particularly important to those who advocate for the most underserved students. New Hampshire has developed a validation tool to maintain academic rigor and included it in school approval reviews. The validation rubric includes elements such as relevance to content area, enduring concepts, and cognitive demand.

- One of the potential benefits (although some perceive it as a challenge) of competency-based learning is that it may make explicit the actual costs to help low-income students learn at high standards. Thus, the next question becomes, if we are dedicated to educational equity, will we be willing to invest in the high-quality learning environments that allow children to succeed in school? These learning experiences may not be school-based it all; we may find that background knowledge, learning in other areas such as music, arts, and sports, or focusing on issues that are relevant to their current lives is what will help children progress in school.

- Concern with the lack of diversity within the Summit and within next generation learning forums in general was raised. Participants suggested that we need to intentionally invest in leadership development, thus increasing diversity and expertise by building bridges with communities of color and networks serving special populations such as English language learners and special education students. Most of all, as leaders we all need to take responsibility for reaching out across racial and ethnic boundaries so that we can build a movement that draws on the diversity of experience and insights across our country.

Carnegie Unit: Creating Meaning for Students and Educators

As participants discussed the implications of de-constructing the Carnegie unit, there were many "aha's" as to the multiple functions it serves within the education system. The Carnegie unit plays a powerful role in managing transactions within the education system. First, it provides a unit of exchange to allow different schools and institutions to relate to each other, especially the transition from high school to college. Second, the Carnegie unit is based upon the amount of time that a teacher is in front of a classroom. It doesn't take into account how effective the teacher is, how much time and effort the teacher contributes outside the classroom, or how much time and effort students contribute.

> *In a proficiency-based system, teachers flourish as much as students.*
>
> – Proficiency-Based Instruction and Assessment, the Oregon Education Roundtable

Once the idea of eliminating the Carnegie unit is introduced, the discussion begins to focus on the changing role of educators rather than student learning outcomes. In Oregon, educators raised the fear that students graduating early would eliminate jobs, yet that only occurs if we operate on just one part of the value proposition. A state policy leader suggested that if we maintain the expectation that our students will continue on to even higher levels of academic work, even while

in high school, job reduction becomes less of an issue. The roles of educators become increasingly important for student-centered learning: coach, resource expert, facilitator, intervention expert, tutor, and even "concierge." Oregon passed Bill 300 to ensure that students sixteen or older could pursue education at state universities and community colleges while in high school. At this point, there is no reason to believe it will reduce the number of jobs, but it certainly means that there will be different types of jobs and that teachers may be doing their work in different ways.

However, there is reason to believe that the roles and responsibilities of teaching will change. Gloria Pineda from Diploma Plus described how competency-based approaches raise the bar. First, teachers are expected to help all students succeed in mastering academic skills, not just some of their students. Second, the scope of learning topics is expanded to include lifelong learning competencies. Thus, the job of teacher will change with greater emphasis on facilitating learning through assignment of learning tasks, performing formative assessment, and guiding students in the development of personal learning plans. It is likely that different types of jobs will develop as schools experiment with organizing human resources around student learning. New Hampshire is positioning itself for this possibility by replacing the word "teacher" with "educator" in its education policies.

Another concern is who is able to grant competency-based credit? If students are learning in the community, who is responsible for ensuring that the learning is at appropriate levels? New Hampshire has handled this issue by ensuring that teachers are responsible for granting credit. Yet this raises another matter as teacher education programs are generally unprepared in assessing lifelong learning standards. Other ideas are being explored, including community-based credentialing that is similar to a merit badge system.

With this increased insight into the functions that the Carnegie unit plays in maintaining the current educational system, the question arises: What becomes the unit of exchange if we eliminate the Carnegie unit? Do we need to look for another "container or unit of learning," one based on mastery, not seat-time? Participants explored how the Carnegie unit captures a social value of the investment of teacher time toward student learning. How will teachers understand their effectiveness and their value if students move on with little effort from them? He suggested that it is important to take the time to clarify the social values we want for our country as we rethink how we value and evaluate learning. Thus, if another "container" or unit of learning is to be created, it must hold value for teachers and students alike.

In the short run, one idea is to not eliminate the Carnegie unit but simply to redefine it. Courses are converted into competencies and learning objectives; end-of-course exams serve as summative assessments. New Hampshire has demonstrated that maintaining the course structure is a viable method for moving forward.

Personalization: Co-Designing with Students

Competency-based learning is inherently personalized as students progress upon their learning trajectory in a way that is unique to them. In addition, competency-based approaches quickly hit a wall without student co-design. Deeper learning—the development and application of knowledge— requires real-world experiences or project-based learning. One participant emphasized, "It is essential to bring student voice much more directly into the learning process." Paul Leather asserted that student-centered approaches were critical, especially for designing "complex performance

assessment, where you can demonstrate deep, deep learning." Gerrita Postlewait of the Stupski Foundation emphasized that "keeping student voice central is essential to ensuring that the traditional system is not reproduced." Participants repeated that student agency must be balanced with a clear focus on helping students achieve. The role of the educators will be critical in ensuring that students are progressing while still able to pursue the education that is most meaningful to them.

Even with a shared commitment to establishing student agency within a competency-based system, it will require creativity to fully integrate it into policy and standards of practice. New Hampshire tried to take the first step of introducing personalized learning plans into policy. Fred Bramante explained that they failed to do so when education administrators balked, fearing it would translate into an IEP (Individual Education Plan) for every student. New Hampshire continues to work toward establishing a personal learning plan for every student as a key design element.

Management Information Systems: Re-Engineering for Results

Some of the competency-based innovators started out with paper-based systems, soon finding it difficult to manage the abundant data generated on each competency and academic standard. As states and districts begin to think about scaling competency-based systems, the complexity of trying to build student-centered information management systems on top of the current top-down accountability information management systems arises. Cobbling together information systems leads to frustration, ongoing costs for troubleshooting, and inadequate feedback loops. Online learning providers, having the benefit of building information technology systems from scratch, developed more advanced technology infrastructure for competency-based learning. Virtual schools have content management systems tied to student data systems, many with abundant digital content resources and embedded online assessments.

Western Governors University (WGU) had the luxury of designing their information systems from scratch. Even then they went through several iterations. Jim Schnitz, Vice-President of Institutional Research at WGU, provided an overview of their system.

> It starts with a standards database. This is behind everything we do in competency-based learning. The competencies have to be validated externally by professionals. The next step is building the assessment objectives and learning resources. These are independently aligned. Assessments are never aligned with learning resources. Assessments are totally independent measures of competencies.

> We use a customer relationship management system to recruit and enroll students. We also have a student information system with a student portal. The graduation plan drives the student learning plan so that everything they are doing is always tied to the goal of graduation.

Other information systems designed for competency-based systems, including Educate used by Adams County School District 50 (Adams 50) and DP.net developed by Diploma Plus, have databases that teachers can use to select the competencies and learning objectives to design curriculum around. DP.net also does the translation to state standards and grading, easing the burden on teachers. Principals or coaches can quickly review and give feedback on curriculum. The information systems allow students to submit their work electronically and also offers virtual space for discussions between and among students, teachers, and principals.

Although the information systems integrate student information and standards-based learning, considerable challenges remain. First, schools must continue to interact with state reporting information systems. In Adams 50, teachers are required to use three different systems. The resources to integrate the systems have been difficult to come by. Many online and blended learning programs are well on their way toward integrated approaches that "plug and play." Open architectures for learning include content and standards databases, student information databases that show their progress on competencies, assessment engines, and virtual learning environments. States and districts may want to consider a shared and open-architected platform that supports competency-based learning approaches.

Furthermore, we are at just the beginning of understanding what information systems can provide to enhance the ability to respond to student needs. What should learning maps look like? Florida Virtual School wants to be able to deliver a system that identifies learning styles, interests, current knowledge, and skill acquisition. Ideally, competency-based information systems will be designed to support students with high mobility, often the most vulnerable students, so that the receiving schools can support continued academic progress on the personalized learning plan rather than having the transition push the student further behind.

Assessments: Where the Rubber Meets the Road

Discussions about assessments streamed throughout all the sessions at the Summit. There was agreement that formative assessments increased in importance in a competency-based system. There was agreement that educators should be careful to design assessments on specifically what they want to measure. There was enthusiasm for embedding assessments into the curriculum. There was commitment to the idea that assessments would become part of the learning process, providing meaningful feedback and support so that students could overcome academic challenges.

Concerns were raised about the way summative assessments are currently structured to be given only once a year. It was proposed that summative assessments should actually occur after a student had mastered materials, serving as a validation mechanism to show that standards were consistent across teachers, schools, and districts. Similarly, it was proposed that summative assessments should be delivered "just in time"—as soon as students are ready. Some participants suggested that greater modularization would be helpful so that students could demonstrate the material they had mastered in shorter periods of time, allowing a sense of progress and portability for those with high mobility. Most of all, participants at the Summit raised concerns about whether the assessment consortia were taking into consideration the possibility of competency-based, next generation learning systems.

Challenges were raised as well. A participant asked how a school could validate a competency for which no one in the school has the competency. He gave as an example a student learning Chinese

in an independent course and asking for credit for speaking a foreign language, yet no one in the school knows Chinese to determine that he had in fact mastered it.

One participant cautioned that assessing lifelong learning competencies can be complicated because of the personal and cultural bias that we all bring to our work. Teachers are not trained to assess this type of skill, nor do we all have the same idea of what it looks like. For children from different cultures or impoverished families, what could look like laziness to others might only be from not having a bed to sleep in and therefore trying to get by without enough sleep. What might look like poor attendance and irresponsibility could actually be taking responsibility for getting siblings fed and to school every morning.

Synchronizing Policy and Practice: New Approaches to State Policy

Gene Wilhoit, Executive Director of CCSSO, offered insights into how the quality of state policy differs between maintaining the traditional system and building the next generation of learning. Traditional education policy seeks clarity so that it can be effectively implemented and monitored. Policies that open the door to innovation will need to have new characteristics. Wilhoit outlined a new set of principles as a state policy framework for next generation learning.

- **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.

All participants agreed that the introduction of competency-based learning and other elements of next generation learning cannot be done through top-down policies or by using compliance as leverage for change. Instead, states must create space for organic development and expansion of innovations. Furthermore, experiences from the leading states show that without incentives and supports, districts and schools may be hesitant to pursue innovations. Thus, states need to create peer learning networks, technical assistance, and rewards for taking risks.

States can use a variety of techniques to let innovation take hold: convening innovators, creating innovation zones, establishing cultures of continuous improvement, defining new performance metrics based on desired outcomes, and setting policies and funding formulas that create incentives for innovation and the desired behaviors.

There are five roles that the state can play that are critical to supporting innovative growth, ensuring that policy is informed by innovative practice, and guarding against slippage of academic standards and inequities.

- **Create Innovation Space:** The introduction of competency-based systems and other elements of next generation learning cannot be done solely through top-down policies or by using compliance as leverage for change. Instead, states must create space for organic development and expansion of innovations. States can use a variety of techniques to let innovation take hold, including enabling the policies as described above: convening innovators, creating innovation zones, establishing cultures of continuous improvement, defining new performance metrics based on desired outcomes, and developing policies and funding formulas that create incentives for innovation and the desired behaviors.

- **Provide Catalytic Support and Knowledge Transfer:** Funds should be dedicated to peer networks that can support rapid exchange of knowledge, leadership development, and technical assistance. These networks can also expedite creative work such as developing and disseminating options for lifelong learning competencies to reduce the cost of every district designing their own.

- **Engage Communities:** Communities need to be engaged early and often. They need to understand the reasons, goals, and elements of the change to competency-based learning. Most of this work will be done at the district and school levels, but states can help by supporting the development of effective communication tools and providing a website that districts can use to help educate communities.

- **Protect High Standards:** States have the unique responsibility of guarding high academic standards and ensuring that students are getting the supports they need to reach them. Developing mechanisms to ensure that there is consistency across schools and districts will be important in the long run, but it is absolutely critical in the early stages of innovations.

- **Offer Adaptive Leadership:** State leadership can play a critical role in supporting innovative districts by using the bully pulpit, recognizing the leaders that are taking risks, and engaging statewide associations early on in vision-building. In addition, they can assist districts that need more time to build community support by offering flexibility in reporting.

One of the most powerful roles a state can play is creating collaborative space for the development of competencies and learning objectives. As states come face-to-face with the implementation of the Common Core State Standards, many opportunities and questions arise. Several examples raised at the Summit are described below.

Well-Designed Competencies: Given that the innovations are still at early stage of development, the field has not agreed upon what makes a well-designed competency. Although some attributes such as learning objectives need to be explicit and measurable are clearly agreed upon, others are less defined. Should competencies be designed to inspire students? Catalyze student agency?

Can they be designed to ignite creativity within our schools and our students' minds? Are there ways of designing them around long-term measures of student success? Can they be positioned so that they are meaningful for the workplace, backing them into a progression of school-based levels?

In creating competencies, states and districts may want to begin to move beyond a linear approach to standards. In offering more complex tasks, competency-based systems challenge the traditional, discrete and sequential notion of standards. It will be important to explore the natural clusters of standards that are highly related to each other.

If innovators and states are all designing their own competencies and learning topics, where does this leave us? It takes time and money to develop competencies, yet we want to make sure that each school identifies them as meaningful, not simply a bureaucratic document. What about students with high mobility, such as those who are migrant, homeless, in child welfare or juvenile justice systems, or simply poor? Can we create state or even national competencies that provide some portability?

Core Competencies: The number of academic standards that have been generated by national organizations and states can be overwhelming. David Yanoski of Marzano Research Laboratories (MRL) suggested that based on a study by MRL the system would need to be changed from a K–12 to a K–22 system in order to adequately teach all standards to mastery. This is certainly a recipe for failure. The Common Core creates a different starting point, focusing on the most important standards. The next step is to translate the standards into core competencies. States can be helpful in identifying a shared set of core competencies that all districts will be building upon. This is also helpful for establishing portability, a key ingredient for ensuring that students with high mobility will benefit directly from a competency-based system.

Lifelong Learning Competencies: The Common Core includes application of knowledge through high-order skills. However, there are other skills that are important to all students but particularly critical for students living in areas of concentrated poverty and/or violence. These include social-emotional and navigational skills that help them overcome trauma and engage others in helping them to manage highly complex dilemmas in their lives. In addition, workforce and career development are critical for finding jobs to support families and increased motivation through the broadened horizons. For students that are first in their families to go to college, gaining knowledge about the college application and financial aid process is imperative. States can facilitate the development of shared lifelong learning competencies, rubrics, and professional development so that educators and community members can work together to support students.

Shared Vision: Investing in the Process

Those state and district leaders that had substantial experience in creating competency-based systems constantly reminded us that we had to engage the communities early and often. The true cost of community engagement is rarely budgeted, placing it at risk of being less than adequate.

Engaging parents and the broader community in thinking through what they want for their children was an important step. Participants agreed that there needed to be high levels of "buy-in" by schools and teachers before moving forward. Adams County 50 postponed implementation for a year until they had 80 percent of their teachers in support of the transition to standards-based learning.

Sustainability will always be an issue with competency-based learning, as it is in any education reform. Thus, constant leadership development will be necessary to ensure that elected officials continue their support. Participants agreed that it was important to explore ways to work together to create greater political commitment and political cover. In addition, participants wanted to learn how to communicate competency-based learning and the other elements of next generation learning to the broader community without causing confusion.

Higher Education: The Missing Partner

It is difficult enough to bring about changes within the K–12 system without simultaneously engaging higher education. Yet, Fred Bramante suggested that in reflecting on New Hampshire's experience, they had made a mistake in their early stages of building a competency-based policy by not engaging higher education early in the process. There are four areas that should be considered in higher-education policy.

- Access to higher education: Students should have total access to college-level courses once they have demonstrated mastery of college-ready skills. This requires streamlining K–12 and higher-education funding and teacher qualification policies so that students can be well on their way in college credits by the time they complete high school. Several states are considering allowing state K–12 funding to follow the student into the first year of higher education.

- Admissions: Higher-education admissions policies and practices need to be revised to be compatible with competency-based transcripts. For example, current transcripts are unable to show advanced competencies within the seat-time-based GPA system.

- Teacher training: Teachers should be trained in competency-based practices, including assessing lifelong learning competencies. This will enable much more rapid implementation in schools and districts.

- Competency-based post-secondary courses: Higher-education programs can also benefit from competency-based instruction. Developmental education should be competency-based so that students can rapidly fill their skill gaps and master the materials to let them into credit-bearing courses. Bill Evenson suggested that higher education can engage in the "tuning" process that clarifies the specific competencies students should know when they major in a subject.

Susanne Daggett from the Oregon Department of Education indicated that the state legislators are exploring ways to expand options for students. "The different funding streams do create a bit of a road block. But people are trying to think about how the money should follow students that are ready to move on to college-level courses."

Unlocking the System

Facilitated by Susan Patrick, a panel offered a provocative set of insights and challenges into unlocking the education system. The panel members included:

- Jim Shelton, Assistant Deputy Secretary of Innovation and Improvement

- Michael Horn, Executive Director of the Education Practice at Innosight Institute

- Gene Wilhoit, Director of Council of Chief State School Officers

- Sajan George, CEO of Matchbook Learning

Alignment with the New Value Proposition

All the panelists agreed that aligning incentives with the new value proposition was critical for driving the transformation of the education system. "The question is how to get student performance in the center of everyone's incentives so they are focused on that one outcome and that's the only one that matters," offered Shelton. Michael Horn suggested that all the integrated providers of online learning "have assembled all of their processes, resources, and value propositions around a competency model. Seat-time just doesn't make any sense when you talk about online learning."

A new business model was proposed to help drive transformation. Horn suggested that the most powerful thing we can do is to incentivize the changes, not "rely on pure supply and demand based on price. We need to fill contracts based on the results that we want to see… Performance-based contracts naturally putting in the incentives to have constant and continuous improvement will really start to drive it. We've never had that before because our whole system is built on inputs."

> *A competency-based system embraces student learning above all other social values. It operates on a new value proposition:*
>
> *By aligning all of our resources (in schools, the community, and online) around student learning to enable students to progress upon mastery, our country can increase productivity in the education system, while simultaneously raising achievement levels overall and reducing the achievement gap.*

George suggested that the school turnaround, online learning, and supplemental education service space are ripe for business model innovation with performance-based or outcome-based payment. "If you actually have this model, then everyone's incentives are aligned. You are not paid because students show up—you are paid based on whether or not they made progress."

Horn expanded on the idea of aligning business models as a way to ensure that the education industry would produce valuable research. "The market does not reward research because we do not pay based on learning outcomes. The system does not reward learning. It's not about learning right now. So if we can get the incentives right that will go a long way in making the ARPA-ED research be rewarded."

Different Ways for Moving Forward

Michael Horn suggested that there are two different ways to advance competency-based learning. One is to think of competency-based approaches as a gateway to next generation learning, requiring us to do the "heavy lift" of systemic change. He suggested that to expect the current system to change itself is a form of "self-cannibalization."

Another approach is to consider competency-based learning as a natural conclusion of a customized system. "If we can create enough models of customized learning, students themselves will put pressure on the system. Imagine students saying 'I'm flying through this stuff' and simply demanding the ability to move on."

> *The reality is that what we do right now in this window of opportunity will be the primary determinant of whether (10 years from now) we have virtually transformed our system or that we are only slightly better. I don't think that the forces at work right now are going to replicate themselves in the foreseeable future. The system is unlocked. Frankly, as things become more stable, it will likely start to refreeze.*
>
> – Jim Shelton

The Power of the Customer

In discussing implications of a customer-driven market or democratization of the market, challenges to how we think about ways to move forward were raised. Sajan George described what this might look like. "What will be unbounded is the democratization of the system. The dollars will follow pupils because most states and most school districts will realize that they can't continue to increase funding for education at the levels that they had before. When other industries have faced this challenge, they've decided that the person best able to decide where the premium offering should be is the customer."

George reminded us to be mindful that democratization will challenge many of our assumptions. "It is important to remember when we talk about democratization, that even the best education reformers, even folks in this room, look at the challenges, whether it's competency-based learning or something else, from a very top-down perspective." He went on to explain that "there are conversations about creating portfolios, pilots, and innovation options for school districts within states, for schools within school districts, and for teachers and students within schools. The reality

is in 10 years students will actually make these choices… They will basically create a portfolio of schools for themselves. If they want to take a Spanish course, then they can take it from a Spanish teacher living in Spain."

He suggested that we don't have to spend extraordinary amounts of time and money on building learning algorithms. "We can spend a lot of time and energy trying to figure out the best learning modality for students, or we can just create an array of options for them, allowing them to optimize for themselves… We just need to make sure that we create the array of options. We'll get smarter on what types work best for students and in what environments. But we'll do that in hindsight rather than foresight."

The power of the customer is even important to accelerating the transformation process. Horn encouraged innovators to act like customers, demanding from state government what you want to see. If you see a blockage, let state policymakers know right away.

Emerging Opportunities

Gene Wilhoit encouraged us to think of the Common Core State Standards as a foundation around which we can innovate. He cautioned that there are many that simply want to use the standards as a way of extending the traditional, linear, factory model. "However, they in fact can be liberating rather than confining. If we are innovating, we should expect to find divergent ways to reach the standards. With successful expansion of educational opportunities, our job is to help learners match opportunities with their needs, getting them all to the end game."

Jim Shelton raised the topic of opportunities with students that are underserved by the current system. "The biggest opportunity for us to take advantage of the non-consumer right now is in the third of the kids that fail to graduate, the ones that are already in alternative schools, and our kids in the juvenile justice system… There are few states in which we are living up to our educational obligation to students in the juvenile justice systems. So there is an opportunity to take advantage of the flexibility that you automatically have in those systems to produce very different models of instruction and build the kind of infrastructure we need at scale."

School turnaround provides an opportunity and a market, given the federal funds directed toward the bottom five percent of schools. Sajan George pointed out that "in three of the models—turnaround, transformation, and restart—you are able to change the curriculum, assessments, professional development, length of school time, school day, school year, and leadership. While the RFP's that are being issued by states and school districts are not specifically requesting competency-based models or hybrid models, you can actually fit your model within those parameters."

> *The budget crisis is increasing areas of non-consumption where you have to reach for other solutions. The nature and depth of the crises will create a spark for innovative solutions that look at reformulating how to deliver education at a much higher productivity level. So what the states have to do is create the space as solutions are introduced.*
>
> *– Michael Horn,*
> *Innosight Institute*

George suggested that there are new models of blended online schooling around the corner. Although the instructional delivery systems may vary, there will be parent demand for their children to have a safe place to learn. Horn reinforced this point, referring to his research that students solely using virtual schooling from home will cap at no more than 10 percent of the student population. Blended learning will likely serve the remaining 90 percent over time.

Whether it is a school or a community center like the Tampa Virtual Learning Center in partnership with the YMCA, the buildings and staff skilled at high engagement will be needed to meet many of the elements of education, including child care, socialization, youth development, and hands-on experience like arts and music. Horn described his vision: "You will have this community center school model in the future. It's flexible. Students can come in as they need to, with their families, learn material online as need be, and are supported by mentors and learning coaches."

Increasing the Rate of Innovation

In addition to aligning incentives around an outcome-based system that keeps student learning at the core of policy, the panelists bounced around several ideas to accelerate the rate of innovation.

Building on the ideas of how to synchronize policy with practice, Wilhoit advanced the idea of being opportunistic. "We need to grab hold and take advantage of opportunities. We don't have the luxury of thinking about pilots—they take too long. We are about systems change, and we are about large-scale change. We've got to begin to think about how we take advantage of the pockets of excellence that are out there and transport them, transform them into standards practice within the system." Shelton reinforced this point, encouraging participants to move forward without getting bogged down by trying to get everyone to see the world the same way we do.

Wilhoit also offered the suggestion that investing in supports and aligning incentives would expedite systemic change. "We haven't put enough supports and incentives behind the opportunities that would draw people towards innovation. So they've not yet reached the point where they're producing the kinds of results that we want or at the pace that we want."

Shelton suggested that we need mechanisms to support coordinated efforts and knowledge sharing. "People are struggling with the same practical implementation issues, whether it's the system to support competency-based models or specific challenges such as how you schedule to allow for the kind of quick changes in grouping that need to happen. These are the kinds of issues people are struggling with in their silos the way we tend to in our sector over and over again. Unless we figure out how to get information to travel more quickly so that we can make progress more quickly, we're going to stumble… We need to draw on the entrepreneurs in the room. We need to build the common systems and get them out there quick, fast, and in a hurry."

Michael Horn and Susan Patrick emphasized that we need to learn from other countries. Patrick challenged us by describing international examples. Turkey created the capacity to serve 15 million students online in three years, while after 14 years, the United States has only 2 million students online. China, in recognizing that its resources were locked up in textbooks, is creating open-education resources and digital content. Horn directed us to look at "emerging countries, developing countries, where there were literally no education systems. You're going to see some cool mobile learning systems start to come up. That's where the real breakthrough innovation is going to ultimately happen because the need is so acute."

The Federal Role in Unlocking the System

Although federal policy has yet to be created to promote competency-based approaches, the U.S. Department of Education has taken small steps toward integrating competency-based approaches into competitive programs, including Race to the Top and I3 competitions. Jim Shelton suggested that there is little within the federal context that directly prohibits competency-based approaches, with the policy framework positioned at the state level. For example, the expectation that states should implement annual assessments does not demand that they are set at a specific time of year or that they are age-based.

Yet several examples were raised that suggest that federal policy is indeed shaping opportunities for expansion of competency-based approaches. Rick Ogston, Executive Director of Carpe Diem Collegiate High School, humorously described the impact of federal policy on local innovation. He explained the irony of trying to be innovative within an education system shaped by No Child Left Behind.

> *From my perspective, the system is not yet unlocked. The key is in the cylinder, but it is not unlocked. I am in a position to go and ask permission to be innovative. Then the question comes, "What is the research basis for your innovation?" So I can't do it unless I prove it works. I'm asking permission from people who are afraid to take risks because of the accountability to the federal government. Welcome to my world.*

Ogston gave another example of how the definition of "highly qualified teacher" is constraining in a competency-based, blended learning model. He is unable to draw on instructors from universities or other states, which is preventing him from getting the "best of the best" for his students.

Examples were shared of how the federal government is still not operating consistently in support of the competency-based effort. One example is how the U.S. Department of Education responded to the concern of higher-education diploma mills. Michael Horn explained that by using seat-time as a tool, concretely defining the credit hour, they locked in the higher-education system, making it more difficult to respond to the competency-based models coming from K–12.

Jim Shelton encouraged participants to let him know if they did find obstacles in federal policy, regulations, or funding processes. He encouraged states to "step up to the plate" as it is state policies that can drive toward competency-based innovations.

We want to create a student-centric system, yet we go about that by a very top-down, adult-oriented approach. It just doesn't make any sense. Students are going to be our best allies and advocates for the kinds of learning that we are envisioning.

– Sajan George

Conclusion

The Summit was the first time that innovators and policy leaders had convened to share their expertise, knowledge, and vision. These were initial conversations, which are sure to continue within states and districts over the coming year. As more states build experience in competency-based policy and approaches, there is sure to be greater insight, more experience to inform the tough issues, and a stronger sense of the strategies that will move us forward.

In the coming year, there are five things that need to be done consistently to accelerate the transformation of our educational system.

- Include innovative space for competency-based and next generation learning in every policy and initiative.

- Develop diverse leadership that can walk in both worlds, improving the traditional system while advancing next generation approaches.

- Draw on leadership approaches that focus on the behaviors that we want, not getting bogged down in the different rationales, terminology, or rhetoric. The Summit demonstrated that we can and must move forward on competency-based approaches without stumbling over the different language used to describe competency-based approaches and the complementary concepts of next generation learning.

- Ensure that traditionally underserved students are benefiting from the new models so that we do not replicate the inequity of the current system.

- Most importantly, make sure that student learning is driving all of our decisions, each and every one of them.

Keeping our eye on the prize is the key to unlocking our education system for new and wonderful possibilities in our communities and our country.

Appendix: Participant List

Lois Adams-Rodgers
Council of Chief State School Officers

Adrian Allison
Ohio Department of Education

Amy Anderson
Donnell-Kay Foundation

Peggy Baker
Equity and Achievement for Standards-based Learning

Wendy Battino
Re-Inventing Schools Coalition

Scott Benson
Bill and Melinda Gates Foundation

Elaine Berman
Colorado State Board of Education

Tommy Bice
Alabama Department of Education

Ginger Blackmon
Highland Technical High Charter School

Fred Bramante
New Hampshire Board of Education

Marty Burke
West Virginia Department of Education.

Victoria Burns
School Administrative District 15, Maine

Michele Cahill
Carnegie Corporation of New York

Andy Calkins
CCSSO/Stupski Partnership for Next Generation Learning

Karen Caprio
School Administrative District 15, Maine

Tom Carroll
National Commission on Teaching and America's Future

Charlotte Chowning
Kentucky Department of Education

Rose Colby
Capital Area Center for Educational Support

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Florida Virtual School

Nicholas Donohue
Nellie Mae Education Foundation

Bill Evenson
Utah System of Higher Education

Angela Faherty
Maine Department of Education

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CCSSO/Stupski Partnership for Next Generation Learning

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Sajan George
Matchbook Learning

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Eve Goldberg
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Robb Gonda
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Council of Chief State School Officers

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Maine Department of Education

Anita Murphy
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Rick Ogston
Carpe Diem Collegiate High School & Middle School

Larry Paska
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Adams School District 50, Colorado

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United States Department of Education

Tom Shelton
Daviess County Public Schools, Kentucky

Ken Slentz
New York State Department of Education

Diane Smith
Business Education Compact

Adria Steinberg
Jobs for the Future

Copper Stoll
Consultant Adams School District 50

Chris Sturgis
MetisNet

Webster Thompson
TaskStream

Sylvia Tidwell-Schuering
Dynamic Learning Maps/University of Kansas; Arroki

Tom Vander Ark
City Prep Academies

Arthur Vanderveen
New York City School District

Nelson Vincent
University of Cincinnati

Matthew Wicks
International Association for K-12 Online Learning

Elliot Washor
Big Picture Learning

Gene Wilhoit
Council of Chief State School Officers

John Watson
Evergreen Education

Carla Williamson
West Virginia Department of Education

Chris Weinman
Board of Cooperative Educational Services

Rebecca Wolfe
Jobs for the Future

Ephraim Weissten
Schools for the Future

David Yanoski
Marzano Research Laboratory

Appendix: Resources

State Resources

Council of Chief State School Officers
www.ccsso.org

New Hampshire
http://www.education.nh.gov/innovations/hs_redesign/index.htm

For more information on the validation rubric, go to www.education.nh.gov/innovations/hs_redesign/competencies.htm

Ohio
http://www.ode.state.oh.us/GD/Templates/Pages/ODE/ODEPrimary.aspx?page=2&TopicRelationID=1864

Oregon Proficiency Project
www.k-12leadership.org/professional-development/proficiency-project

District Resources

Adams 50, Colorado
http://wiki.adams50.org/mediawiki/index.php/Main_Page

Florida Virtual School
www.flvs.net

Lindsay Unified School District, California
http://www.lindsay.k12.ca.us/

New York City
http://schools.nyc.gov/community/innovation/izone/default.htm

New York City's iZone, a Center on Reinventing Public Education's Working Paper www.crpe.org

Reinventing Schools Coalition
www.reinventingschools.org

School Models

Carpe Diem
www.cdayuma.com

Diploma Plus
www.diplomaplus.net

Highland Tech High
http://www.highlandtech.org/

Kunskapsskolan
http://www.kunskapsskolan.se

Newfound Regional High School
https://sites.google.com/a/sau4.org/nrhs/

Western Governor's University
http://www.wgu.edu/

Virtual Learning Academy Charter School
http://www.vlacs.org/

Young Women Leadership Charter School
http://www.ywlcs.org/

Youth Connection Charter School Virtual High School
www.k12.com/yccs/results/success-stories/

Papers and Resources

Available at American Youth Policy Forum: aypf.org

- A New Model of Student Assessment for the 21st Century, Camille Farrington and Margaret Small. 2008.

- Building Competency-Based Pathways: Success and Challenges from Leaders in the Field

Available at iNACOL: inacol.org

- Clearing the Path: Creating Innovation Space for Serving Over-Age, Under-Credited Students in Competency-Based Pathways

- It's Not a Matter of Time: Highlights from the 2011 Competency-Based Summit

- When Success is the Only Option: Designing Competency-Based Pathways for Next Generation Learning

Available at Innosight Insitute: innosightinstitute.org

- Wichita Public Schools' Learning Centers: Creating a new educational model to serve dropouts and at-risk students

- Florida Virtual School: *Building the first statewide,Internet-based public high school*

From Reinventing Schools Coalition: www.reinventingschool.org

- Delivering on the Promise: The Education Revolution by Delorenzo, R, Battino, W, Schreiber, R and Carrio, B. Gaddy.

- From Lumina Foundation

- Information on the tuning process for higher education can be found at http://www. luminafoundation.org/newsroom/topics/tuning-adventures-in-learning.html

Blogs and Websites

International Association for K-12 Online Learning website and iNACOL Competency-Based Wiki

www.inacol.org

EdReformer

Edreformer.com

Youth Transition Funders Group Connected by 25

Cby25.blogspot.com

iNACOL

International Association for K-12 Online Learning