Deeper Learning: Policies for a 21st Century Education

BY ACE PARSI
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Deeper Learning: Policies for a 21st Education

By Ace Parsi

As students enter the rapidly changing world of college, work, and civic life, they face demands for higher levels of education; greater ability to create, use, and communicate knowledge; and the capacity to collaborate with colleagues of diverse backgrounds and talents. Their future success demands they acquire more than superficial learning from their K-12 schooling. Rather, they must demonstrate deeper learning (box 1).

Numerous indicators highlight the need for this shift:

- Students are likely to apply for jobs that have yet to be invented. Analyses show that nearly two-thirds of today’s elementary school students could end up doing work in areas that do not yet exist.¹
- There is a present skills gap. The skills today’s graduates need to succeed are not the skills they have acquired during their K-12 education. A survey of Fortune 500 companies and another of members of the National Association of Colleges and Employers highlight that the most important skills employees can have in the 21st century are teamwork, problem solving, and oral communication. Other surveys show that far too many students enter the workforce lacking these skills.²
- The United States must compete internationally. Other nations already place greater emphasis than does the United States on deeper learning competencies and are seeing significant gains. Results on the Programme for International Student Assessment (PISA) place US students behind many of the international peers they once led.³ This gap is all the more significant as technology continues to facilitate the globalization of knowledge creation and places of work.

What Are Deeper Learning Skills?

Throughout this text, deeper learning refers to an education that facilitates not only mastery of academic content but other key competencies as well. These include but are not limited to critical thinking and problem solving, effective communication, collaboration, learning how to learn, self-regulation, and academic mind-sets important for success in college, career, and civic life. The common theme among these skills, as studied by a 2012 National Research Council panel, is that they represent “the process by which an individual becomes capable of taking what was learned in one situation and applying it to new situations,” a process referred to as educational transfer. Recent studies by the American Institute for Research suggest that schools focusing on deeper learning are not only successful at improving the competencies highlighted above but other outcomes such as academic achievement and higher graduation rates as well.

As states work to integrate deeper learning into their educational goals, NASBE encourages each state to convene a diverse array of stakeholders—employers, postsecondary institutions, civic leaders, educators, parents, students, and others—to reach a commonly understood definition that can result in greater ownership by stakeholders across the state. Through this process, a number of states have identified additional measures that reflect deeper learning: Alabama’s Plan 2020 skills, which include problem solving, precision, and the desire to be lifelong learners; the Kentucky state board’s explicit definition of “Global Competencies”; and Oregon’s Essential Skills, which includes demonstration of civic and community engagement.

Some may mistakenly conclude that deeper learning is about watering down rigorous content. The reality is that deeper learning is a higher standard of rigor. Students are not only expected to master academic content—math, English, civics, science, foreign languages, and arts—but also demonstrate that mastery through other key skills and competencies deemed essential for 21st century success.


The call for deeper learning places new demands on education systems already struggling with how best to educate a student body that is marked by increasing economic, cultural, linguistic, and racial diversity: The new educational equity imperative now demands all students be educated to this higher, deeper level.

Many states—and state boards in particular—have articulated and supported policies to enable deeper learning. Such policies include the adoption and implementation of new college, career, and civic-ready standards that focus on deeper understanding of fewer, more essential areas of content; accountability and assessment systems that not only emphasize what students know but what students are able to do with knowledge; support for educator preparation systems that enable deeper learning competencies; and provisions for greater flexibility and innovation for schools working to prepare students for this new world. While much of this work is under way across the country, states are at different stages of implementation, and challenges remain in making cohesive connections across initiatives.

This report is aimed at supporting state boards of education that are working on providing significantly more students with deeper learning opportunities and facilitating board-level conversations on key related topics. The report provides foundational principles that underlie deeper learning, explores issues, provides state examples (boxes 2 through 6), and includes worksheets that boards can use to facilitate discussions and come to solutions that make sense given the unique needs of each state.

DEEPER LEARNING 101: Fad or Research-Based Need?
Deeper learning is not really new: Many of you can highlight instances in your own education experiences where you engaged in deeper learning. It may have happened when you applied a new formula to complete a lab experiment in science class or made a presentation in English class on how one of Shakespeare’s plays applies to modern life. Indeed, deeper learning takes place every day in classrooms and schools in states across the country. The question is, given the demands of postsecondary education, career, and civic life, how do these experiences get scaled up to become the norm for significantly more students?

While this may not be an easy question, there appears to be no shortage of answers—state board of education members are inundated with the latest assessment tools, curriculum frameworks, or educational innovations that claim to be the silver bullet. In this environment, it becomes increasingly important that each initiative promoting deeper learning reinforce the board’s vision for a college-, career-, and civic-ready education and that this vision be built upon tested theories, research, and practice.

For example, one such foundational model is Bloom’s Taxonomy (figure 1). Used by both educators and policymakers since its development in 1956, Bloom’s Taxonomy describes the cognitive processes that lead to learning, beginning with remembering and understanding knowledge, then applying and synthesizing that knowledge, and last, the ability to evaluate what was learned and create new knowledge. Thus, as students and teachers progress upward within the taxonomy, they are exposed to greater opportunities to engage in deeper learning: Higher levels on the taxonomy require students to think critically and solve problems, communicate and collaborate around those problems, and in the process demonstrate greater mastery of the content. Similar to Bloom’s Taxonomy, Webb’s Depth of Knowledge diagram can be used to classify the rigor of learning experiences across four cognitive domains: level one, recall; level two, skill and concept development; level three, strategic thinking; and level four, extended thinking (figure 2). As educational experiences progress from levels one and two to levels three and four, students demonstrate deeper learning by drawing their own conclusions from a concept and connecting and applying their conclusions to new problems.

Reinforcing the importance of many
New York has been a leading state in support of college- and career-ready standards. Following the New York State Board of Regents’ adoption of the Common Core State Standards (CCSS) in 2010 and in support of the Regents Reform Agenda, the state set up a variety of resources to aid districts and schools across the state to prepare students for college, career, and civic success.

One of the most significant was EngageNY. Developed by the New York Department of Education, EngageNY is a one-stop website of high-quality education resources and instructional content, a video library highlighting effective practice, and other professional development resources and materials for teachers, parents, and community members, including an initiative designed to meet the needs of linguistically diverse communities and their teachers, “The Bilingual Common Core Initiative.” EngageNY resources have been viewed 60 million times by 5 million unique visitors who have accessed professional development tools, instructional materials, and resources for educators and other stakeholders. The site’s Expeditionary Learning materials, which emphasize deeper learning, have been downloaded at least 2 million times by educators in 23 states.

In partnership with Achieve, Inc. and Connecticut and Rhode Island, New York was part of the original Tri-State Collaborative to develop criterion-based rubrics and review processes, (Educators Evaluating the Quality of Instructional Products, or EQuIP) to help distinguish the quality of units and lessons designed to address the CCSS. These rubrics are designed to help local practitioners distinguish, evaluate, and improve high-quality lessons and instructional materials that translate standards into meaningful student experiences.
processes such as critical thinking and problem solving and academic behaviors such as perseverance and accepting critical feedback were found to be key determinants of postsecondary educational success or failure. Similarly, as referenced earlier, surveys of employers highlight that in addition to basic academic knowledge, new employees are hobbled by lack of essential competencies such as critical thinking and problem-solving skills, written and oral communication, teamwork, and self-direction. To this end, if the goal of K-12 education is to prepare all students for the future rather than the past, deeper learning competencies simply cannot be neglected.

From the standpoint of state boards of education, no one policy solution supports deeper learning. Indeed, states must altogether resist the myopic temptation to focus on individual issues. By taking a more systemic approach, many boards and states, including those highlighted in this document, have taken significant steps toward transforming teaching and learning in their states by making connections among critical issues. These boards have leveraged several policy vehicles within their purview to effect significant change:

- approving standards, curriculum, and materials used in classrooms that reinforce deeper learning;
- developing high-quality professional learning systems that reinforce deeper learning;
- ensuring that evaluation structures of effectiveness highlight deeper learning competencies;
- providing flexibility to schools and educators to innovate in facilitating deeper learning while ensuring high standards of quality; and
- facilitating systemic change necessary to enable deeper learning.

STATE BOARD ACTION 1: Approve standards, curriculum, and materials that reinforce deeper learning.

Employers are not looking for students to do better by the current system, whether that’s simply knowing more content or coming in with a higher grade point average. Instead, employers are looking for students—and subsequently their schools—to meet a new, higher bar: a complete, competitive education where students can, among other skills, apply what they learn across subjects in an interdisciplinary manner; organize and synthesize their work; and work and communicate collaboratively across diverse teams. Ensuring that schools help students meet these demands is not about expanding the use of current resources but a matter of realigning standards, instructional materials, and other supports to meet this new, higher bar.

Teachers and schools can use a variety of strategies and activities to make deeper learning more likely. They include posing longer, conceptual problems for students to solve; seizing opportunities to prime student motivation; facilitating grit and resilience; providing opportunities for students to demonstrate their understanding and skills through multiple representations of a subject, including, when possible, deeper applications of learning; and enabling more learner-centered approaches including student presentations with teacher questioning.

Delaware’s Professional Learning System

Delaware’s teaching profession has transformed into one of the nation’s most supportive of deeper learning. One of the two original federal Race to the Top winners, the state built upon initial investments in its professional learning system to empower greater collaboration and innovation among educators. For example, it leveraged $8.2 million of its Race to the Top funds on a data coaching program, in which teachers are trained to use data to facilitate more personalized learning.

Delaware also provides each teacher 90 minutes of collaborative planning time each week in which to reflect on data, plan for differentiated instruction, and build other skills. Teachers are evaluated and supported by school administrators through classroom walkthroughs and subsequent feedback on teaching practice based on observation rubrics that emphasize deeper learning. Lastly, the state’s teacher evaluation system, the Delaware Performance Appraisal System, strongly emphasizes creating more participatory, engaging classroom environments.

Rather than focusing on any one lever of professional learning, Delaware changed the entire professional learning system so it is better aligned to the goal of development of deeper learning competencies.
There are many other characteristics of learning strategies that facilitate deeper learning, but a general concept holds: States and their schools must shift focus from emphasizing a breadth of knowledge that can easily be Googled to a depth of knowledge that can be transferred.10

What role can state boards play in facilitating these experiences? Answering this question may be as much about what boards should not do as it is what they can do. Among the many reasons education has been and remains a local control issue is that students, parents, teachers, and other local stakeholders are best positioned to know the individual needs of students, thus making it impossible for boards to dictate the meaningful student-educator relationships that are essential to deeper learning, prescribe the material and content to be covered on a particular school day, or define the school curriculum, among other areas.

Yet boards are not powerless. They can take many actions related to standards, curriculum, and materials to support deeper learning:
• conduct a gap analysis that identifies deficiencies between existing standards and key deeper learning competencies and then eliminate, revise, or adopt new standards as needed;
• create effective statewide standards implementation plans that are realistic and supportive of educational practice that leads to deeper learning;
• direct departments of education to provide schools frameworks, rubrics, and toolkits that enable educators to identify quality materials and resources to support high-quality learning experiences; and
• facilitate clearinghouses where high-quality resources are housed and can be accessed.

Through these actions, boards can support an education system that is more true to the higher aspirations that the state’s postsecondary institutions, employers, and citizens demand.

STATE BOARD ACTION 2:
Develop high-quality professional learning systems that reinforce deeper learning.
Any change in student learning requires change in educator learning as well. Misalignment between state student learning goals and the educator’s capacity to support those goals translates to nothing more than nice words, with no resulting effects in actual student experiences. Of course, states must successfully recruit qualified candidates at the outset, but that is not where their responsibility stops. To prevent misalignment, each state must take three steps: first, identifying key state deeper learning goals; then, identifying the educator capacities to translate those goals into learning practice; and last, reflecting on necessary policy shifts that prepare and support educators in developing deeper learning capacity.

States must not skip past those first two steps (table 1). For example, student mastery of academic content can take place only when teachers are experts in teaching.

Oregon’s Measures of Success
A hallmark of Oregon’s noteworthy effort to measure deeper learning competencies was its adoption of the Oregon Essential Skills in 2008 by the Oregon State Board of Education. The skills highlight nine proficiencies students should be developing during K-12, including thinking critically and analytically, demonstrating civic and community engagement, and speaking clearly and coherently.

Three of these skills are now required for graduation: reading to comprehend a variety of texts, writing clearly and accurately, and applying math in variety of settings.

The state board also adopted the Oregon Diploma, with new high school graduation requirements tied to demonstration of the Oregon Essential Skills, along with credit and personalized learning requirements. The state also provided students the opportunity to demonstrate proficiency outside of school rather than have their knowledge measured through Carnegie units alone. Lastly, to create greater alignment across the system, other measures of success were modified as well, including the ways teachers and schools were evaluated. The new Oregon Framework for Teacher and Administrator Evaluation and Support Systems, adopted by the state board in 2012, includes multiple measures of teacher effectiveness: classroom observations, samples of student work, portfolios, “students’ growth and proficiency/mastery of the standards, and evidence of deeper learning and 21st century skills.”

Oregon state board and other state policymakers have sent a clear message that a single test-score measure does not reflect success—it is a more comprehensive measure that gives a better picture of students’ deeper learning abilities.
### Table 1: Aligning Professional Learning Systems and Student Learning

<table>
<thead>
<tr>
<th>Sample of Key Student Learning Goals</th>
<th>Related Educator Skills and Professional Conditions</th>
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| Mastery of academic content         | Skilled teachers who have both deep mastery of content and quality pedagogy in subsequently relating content and school principals who are skilled as instructional leaders, not just managing logistics of school buildings.  


| Collaboration                      | Teachers skilled at designing projects that facilitate structured student collaboration and the skills to effectively collaborate among their own educator peers.  


| Cultural sensitivity                | Educators must help all students respect their peers’ perspectives regardless of background and culture and model this same sensitivity themselves.  


| Educational transfer               | Teachers trained in key strategies such as priming motivation, using multiple representations, and encouraging self-explanation who are further supported through common planning time to facilitate inter- and cross-disciplinary educational experiences.  


| Reflection upon individual learning goals | Teachers trained in facilitating student metacognition, the ability to reflect on one’s own learning.  


| Critical thinking and problem solving within real-world contexts | Teachers and school leaders who are not only trained in pedagogies that facilitate this learning but also equipped with the capacity to manage strong external partnerships.  

in their field and school leaders have the skills to be instructional leaders, not just managers of building logistics. Similarly, enabling students to develop as self-reflective, collaborative problem solvers requires that both their teachers and school leaders not only have the competencies to support projects and lessons that develop those skills but are also able to manage necessary external partnerships to enable more authentic student learning experiences. Lastly, in order to meet the needs of each learner, time, resources, and training must be invested in enabling educators to plan common, interdisciplinary lessons, discuss student challenges, and refine and improve their pedagogical approaches to teaching and learning.

These necessary shifts in both practices and roles don’t happen by accident—they happen through a continuum of policies that prepare and support teachers and school leaders from before they enter the profession to their last day in the classroom and school. This continuum includes the following:
- standards for teacher preparation programs that highlight deeper learning competencies;
- provisions that ensure the capacity to support deeper learning competencies is incorporated into licensure and re-licensure of teachers, including through alternative licensure models;
- incorporating development of quality instructional practices that lead to deeper learning in teacher and leader induction and mentoring experiences; and
- inclusion of deeper learning competencies within state professional learning standards and provisions and resources for structures such as common planning periods and professional learning communities.  

Along the continuum of teacher preparation, licensure, relicensure, induction, mentoring, and professional learning, the state can provide supportive structures that build educator practice and thereby empower student deeper learning—common planning periods and support for professional learning communities that enable integrated, collaborative pedagogy.

**STATE BOARD ACTION 3:**

**Ensure that evaluation structures of effectiveness highlight deeper learning competencies.**

As in other fields, a common adage holds in education: what gets measured gets valued. If students, teachers, and schools are to work toward these higher goals

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**New Hampshire’s Competency-Based System**

In 2005 New Hampshire became the first state to move from a system based on traditional Carnegie units to a competency-based education system. While outside spectators may think this reform to be largely a series of local initiatives in the “live free or die” state, it in fact represents a concerted, thoughtful approach that has created a foundation for success.

The reform is built upon a clearly articulated statewide vision that guides supportive initiatives:

- The Mission of the New Hampshire State Board of Education is to provide leadership, support, and oversight of the state’s education system to ensure that every individual acquires the skills and knowledge to succeed in a competitive global economy and thrive as a 21st century citizen.
- The Vision of the New Hampshire State Board of Education is to harness community resources and technology to provide a world class, personalized, student-centered education in a flexible, innovative learning environment that promotes active engagement to maximize the potential in every individual.

Anchored in its mission and vision, the state has realigned other policies—including standards of school improvement, professional learning, and high school graduation requirements—to support its competency-based education initiative.

New Hampshire did not force this system on schools overnight, nor did it leave districts to their own devices on implementation. The state board of education set a three-year window for districts to establish alternative pathways to diplomas and provided a variety of supports for districts, schools, and teachers to implement the policy, including technical advisories, professional learning networks, and opportunities for educators across the state to connect virtually to share instructional tips and learn from each other. This strategy of testing initiatives before scaling up continues today as the state pilots its new Performance Assessment for Competency Education (PACE), a component of the state’s new student assessment system, with willing districts before it mandates the system statewide.

For more information on New Hampshire’s approach to innovation, see *New Hampshire: Our Story of Transformation.*
that reflect deeper learning, then what states choose to measure must reflect their aspirations. Educational measures both incentivize action and provide information essential to continuous improvement. Even the noblest efforts can be diluted when state measures of success fail to align with materials and preparation efforts outlined in actions 1 and 2.

To prevent misalignment, boards should examine the signals and feedback that stakeholders across the education system receive and evaluate whether the information the state provides reflects a common goal of continuous improvement toward deeper learning. For example, can students believe they are expected to master and apply academic content if requirements for graduation are based solely on seat time, or if formative and summative assessments only ask them to recall information through multiple-choice exams? Can teachers think of themselves as facilitators of deeper learning experiences if their evaluation is heavily skewed toward student performances on these low-quality exams rather than student growth on a variety of important outcomes? Can schools marshal their resources to support deeper learning efforts if the school is triggered into an improvement system based on a narrow set of outcomes, or if the feedback they are provided with is only summative rather than summative and formative? Can any of these stakeholders use feedback from a narrow measure and accountability system to improve practice? The likely answer to most of these questions is no.

To help create real momentum behind deeper learning efforts, states can create an incentive and feedback system to provide students, educators, and schools appropriate signals and information that places due emphasis on the knowledge and skills necessary for deeper learning. There is no one path to ensuring educators and students are sent the right signals, but successful states remain cognizant of the impact of information and signals to each stakeholder across the education system—from the eighth grader sitting in algebra to the administrator considering broader district professional learning investments. Promising strategies include the following:

• high school graduation requirements or options that call on students to demonstrate competencies through student-driven projects;

In Kentucky, college and career readiness has not been about a single policy but rather a comprehensive set of policies resulting from the joint effort of the state legislature, Council on Postsecondary Education, state’s Department of Education, and the state board of education. The resulting common vision led to many firsts: the state was one the first to adopt, implement, and assess the Common Core State Standards and one of the first to adopt and implement the Next Generation Science Standards. Kentucky has also been a leader in breaking down barriers to and creating supports for effective policy implementation. Notable among these efforts was Kentucky’s Senate Bill 1, which revised the standards, assessment, and accountability systems in the state to meet national and international benchmarks for success. As a consequence of this bill, the Kentucky Department of Education, State Board of Education, and Council on Postsecondary Education collaborated to develop four unified strategies to reduce by half the percentage of Kentucky high school graduates not prepared for credit-bearing, entry-level college coursework. The four strategies—accelerated learning opportunities, secondary intervention programs, college- and career-readiness advising and individual learning plans, and bridge programming and student supports—aimed to break down walls between various initiatives across K-12 and postsecondary systems to enable students to have meaningful experiences that prepare them with deeper learning skills.

In addition to these initiatives, the state created other supports to direct implementation and promote continuous improvement. For example, the state initiated the Continuous Instructional Improvement Technology System (CIITS), which connects standards, instructional resources, formative assessments, professional learning, and evaluation of teachers and principals in one comprehensive resource. While initiatives like CIITS help advance implementation of current strategies, other policies such as the state’s Districts of Innovation initiative—which lets districts petition the state board for waivers of certain administrative regulations and statutory provisions in order to redesign student learning to engage and motivate more students—enable continued innovation.

Through these and other initiatives, Kentucky has created a systemic strategy to communicate and work toward a clear vision of college and career success, provide students with deeper learning experiences, transform the state’s professional learning system, and pave the way for future innovation.
Indeed, innovating should not connote policymakers acting upon local educators. While it is indeed important for state policymakers to set clear parameters for quality, they should be creating a supportive environment where local practitioners can provide students experiences that lead them toward deeper learning. Nevertheless, as experienced board members know well, not every recommended change at either the local or state level that comes across a board agenda is of equal merit—many represent nothing more than fads.

This leaves states and state boards in a tricky position, one where they are asked to seize opportunities while not exposing students and educators to passing whims. When successful, local educators are empowered to design transformational experiences toward a commonly understood goal, resulting in satisfied students, teachers, and parents; when unsuccessful, districts and schools shift resources to meet ill-defined targets, teachers feel frustrated by policies that are misaligned to their experience, and worst of all, students are deprived of educational experiences that effectively prepare them for the future. To that end, state boards must remember that innovation itself is not an end—it is a means to broader educational goals—namely, deeper learning for all students.

To avoid such pitfalls, states must have an overall strategy embracing high-quality innovation, measuring the success of that innovation, and filtering out those efforts not grounded in best practice. Among other steps, the strategy should include the following:

- a clear, board-defined vision of preparing all students for college, career, and civic success and then ensuring that any initiative the board considers is aligned to and reinforces this vision;
- appropriate steps to expand options on who, when, and how learning is delivered, while ensuring that changes

**STATE BOARD ACTION 4:**
**Provide schools and educators with flexibility to innovate.**

Even with the strongest feedback and incentive systems in place, states must remain vigilant against complacency. As alluded to earlier, the significant disparities between the deeper learning skills students are expected to demonstrate upon high school graduation and those they actually leave with demand significant shifts in educational practice. Students, teachers, and schools are not the only ones who must adapt to the demands and opportunities of the 21st century: State education systems must do the same, seizing the benefits of new technologies, best practices, and lessons from mistakes along the way to foster meaningful innovation (box 7).

There are two interrelated challenges for state board of education members in this environment: not falling victim to educational fads while enabling and empowering local innovation.

**Dimensions of Educational Innovation**

There are many ways states can think about innovation, defined here as the process of empowering local schools and districts to expand who, where, when, and how learning is delivered so as to enhance students’ likelihood of developing deeper learning competencies:

- **Who** in your state is charged with delivering learning? Is it just the teacher, or is it also students’ peers, parents, employers, postsecondary institutions, and community members?
- **Where** in your state does learning take place? Is it just in the school building, or are there provisions that encourage meaningful learning to take place at home, at a job site through internships, on college campuses, or in the community?
- **When** in your state does learning take place? Is learning time limited to the school day or school year, or does your state facilitate a system where learning is the constant and time the variable?
- **How** does learning take place in your state? Is the primary mode of learning a lecture-based classroom, or do students also learn through project-based, work-based, or service learning?

adhere to the board’s vision;
• demonstration of understanding and
humility in scaling up any approach
statewide by testing new approaches
with waivers, innovation zones, or pilot
programs with willing schools and
districts (or networks of schools and
districts); measuring their success; and
learning from successes and failures; and
• a comprehensive long-term
implementation plan for any scaled-up
initiative to demonstrate commitment
to success that includes a strategy
to communicate its rationale and
results to practitioners and the
broader public. 12

Together, these steps can ensure that
the board provides an open door for
innovation while at the same time enabling
the state to move steadily toward a
common vision of college, career, and civic
success for all students. Along the way,
states must ensure that innovation toward
deep learning does not create a new set
of hoops and procedures practitioners
are asked to comply with, in the process
squashing the very purpose of innovation.
By creating clear goals and providing
for quality readiness assessments of
practitioners on the front end of engaging
in innovation, states can stay on the
cutting edge while ensuring all students
are provided a high-quality education that
leads them toward deeper learning.

STATE BOARD ACTION 5:
Facilitate systemic change to
enable deeper learning.
The fact that the four previous sections
have each discussed a separate issue may
suggest a strict delineation between them;
the issues are distinct but by no means
silod. Indeed, the challenge for education
policymakers is not to change or revise
a single policy but to develop a coherent
education system.

Some of the pitfalls of addressing policies
in isolation have already been highlighted,
and others may not be surprising. For
example, if the goals of a professional
learning system are not aligned to the
measures of an accountability system
or dimensions of an assessment system,
teachers and school leaders can be left
ill-prepared and confused on what they are
working toward. Similarly, misalignment
between materials and tools teachers are
provided and the professional learning
teachers receive could lead to wasted
resources and needless frustrations.

Without preparation and support,
educators may be tempted to ride an
innovation out when a state unveils a new
approach, believing that “this too shall
pass.” In these and other ways, policy is a
web—actions in one area affect others.

State education agencies and the state
boards of education who oversee them
must structure themselves and their
services to accomplishing a new goal:
ensure that they are not mere compliance-
monitoring entities but active and
constructive partners. State boards of
education and state education agencies
can take several actions to make accomplishing
this goal more likely:
• ensuring that innovative actions are
  couched within a well-communicated,
  comprehensive definition and vision for
  college, career, and civic readiness that is
  both aligned to postsecondary education
demands and allows educators to see
different initiatives pointing toward the
  same worthy goal;
• communicating their policymaking
effectively and engaging stakeholders
  at an early enough stage to forge
  investment and commitment;
• conducting policy audits to ensure
  processes of implementing and
  monitoring programs are transparent,
  simple, and build toward continuous
  learning and improvement across the
  state, its districts, and schools; and
• creating more seamless connections
  across early childhood, K-12,
  postsecondary, and workforce
development systems.

By approaching these issues systemically,
boards increase the likelihood of success
for each element of the state reform
agenda.

ABOUT THE WORKSHEETS
The worksheets posted here (http://www.
nasbe.org/?attachment_id=12772) are
intended to guide discussions around
each of the major policy areas involved in
ensuring deeper learning. Each worksheet
includes a process for examining and
inventorying current policies and a set of
questions for boards to consider.

As highlighted throughout this document,
transforming a state system to one that
supports deeper learning can be extremely
complex. However, as also highlighted in
examples throughout the document, it
is doable, and it is something many state
boards and other state policymakers are
already working toward successfully. And
doing nothing is not an option—states
must provide students an education that
prepares them for their future rather
than the past. The worksheets will help
state boards consider these tough and
sometimes volatile issues in a structured,
productive manner.

Finally, it should be noted that because
states are at different stages in addressing
issues in deeper learning, the worksheets
are not intended to comprehensively list
issues a state board should be considering.
Rather, they are intended to help boards
explore the role the state, and specifically
state policy, has in addressing deeper
learning issues.
Notes


10. A number of existing state-led efforts reflect state efforts to focus on both breadth and depth rather depth alone. These efforts range from the adoption of college- and career-ready standards in mathematics and English language arts by more than 40 states and the District of Columbia to new standards in other subjects and disciplines from science and social studies to health and social and emotional learning.


12. Though many of these recommendations may be similar to school-level changes, the recommendations are explicitly written to guide state policy.
## Appendix A: State Examples and Resources

**State Board Action 1:** Approve Standards, Curriculum, and Materials That Reinforce Deeper Learning.

<table>
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<tr>
<th>Policy Action</th>
<th>State Examples</th>
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<tbody>
<tr>
<td>Conducting a gap analysis between existing standards and their potential to support student deeper learning</td>
<td>Before adopting the Next Generation Science Standards, Washington state developed a comparison of the NGSS and the 2009 Washington Science Learning Standards. The document included general advice around the standards as well as comparisons between new and existing standards through elementary, middle, and high school and technical advice around a transition plan. The Washington State Board of Education adopted NGSS, known in the state as the Washington State 2013 Science Learning Standards, in October 2013.</td>
</tr>
<tr>
<td>Guiding statewide implementation of standards</td>
<td>EngageNY.org is developed and maintained by the New York State Education Department (NYSED) to support the implementation of key aspects of the New York State Board of Regents Reform Agenda.</td>
</tr>
<tr>
<td>Adopting curriculum frameworks, rubrics, and materials necessary to implement standards</td>
<td>The Illinois State Board of Education and other states have promoted the use of the EQuIP rubric to ensure instructional materials are aligned to the Common Core State Standards (CCSS) and reinforce skills associated with college, career, and civic success.</td>
</tr>
<tr>
<td>Establishing clearinghouses for practitioners to share materials</td>
<td>One state that has been a leader in this effort is Utah. In 2009, the state board approved an administrative rule that allows open licensing of materials for noncommercial use created by state employees using public funds, including teachers. Rather than being limited to a handful of expensive providers to access materials, the state board’s rule enables Utah’s educators to access curricula, assessments, and other materials created by their peers at little to no cost. This initiative and others like it across the country allow teachers, acting as a professional community, to more easily access and share resources that enable high-quality learning experiences.</td>
</tr>
</tbody>
</table>
RESOURCES

   **Authors:** National Association of State Boards of Education and the American Institute for Research
   **Summary/Relevance:** While this tool is designed to guide implementation of new science standards, its principles can be applied to the implementation of other standards as well. The resource comes with state examples, questions, and additional research on seven domains of standards implementation: vision and strategic plan, coalition building, communication, supports for district implementation, assessment, college and career readiness, and educator effectiveness.

2. Framework for 21st Century Learning
   **Author:** Partnership for 21st Century Skills
   **Summary/Relevance:** This framework presents a holistic view of 21st century teaching and learning that combines 21st century student outcomes with innovative support systems that help students reach those outcomes. These outcomes include the 4Cs of learning and innovation skills, information, media and technology skills, the 3Rs of core subjects with 21st century themes, as well as life and career skills. The support systems include standards and assessments, curriculum and instruction, professional development and learning environment.

3. The Four Keys
   **Author:** David Conley, Educational Policy Improvement Center
   **Summary/Relevance:** This framework provides keys to college and career readiness for students. The four keys Conley identifies are (1) key cognitive strategies, or “Think”, (2) key content knowledge, or “Know”, (3) key learning skills and techniques, or “Act”, and (4) key transition knowledge and skills, or “Go.”

4. Promoting College and Career Readiness: A Pocket Guide for State and District Leaders
   **Authors:** Megan Sambolt and David Blumenthal, American Institutes for Research
   **Summary/Relevance:** This article informs states on how they can implement reforms related to student college and career readiness that is part of the ESEA flexibility plan requirements. It first establishes the importance of college and career readiness for all students and then discusses how college and career readiness is addressed in the approved plans. Ultimately, it contains the three principles for implementing the approved plans or proposed reforms to support student college and career readiness that include (1) the adoption of college- and career-ready standards, (2) the transition to and implementation of those standards statewide, and (3) the development and administration of high-quality assessments that measure student growth.

5. Implementing Common Core State Standards and Assessments: A Workbook for State and District Leaders
   **Authors:** Achieve, U.S. Education Delivery Institute
   **Summary/Relevance:** This workbook contains a framework for how states can enact policies supporting the implementation of CCSS. It also offers sample timelines, best practices, implementation advice, and critical exercises to guide the implementation of CCSS. Each chapter of the workbook contains one or more of the following: (1) diagnostic questions to gauge where the state stands in a certain issue, (2) a brief narrative that offers a potential course of actions, (3) case studies to illustrate the principles discussed in the brief narrative, and (4) exercises that help to flesh out the state’s implementation strategy. The workbook covers a wide array of implementation facets, including (1) policy alignment, (2) educator training, preparation, evaluation and licensing, (3) educational technology, (4) accountability system, and (5) student transitions to higher education.

6. Ten Principles of Effective School Design
   **Author:** New Visions for Public Schools
   **Summary/Relevance:** This short piece contains 10 multifaceted principles of effective school design that could help inform states about the college, career, and civic readiness supportive standards that they can adopt and implement, as well as other materials or resources needed to support such actions. The 10 principles cover what parts of comprehensive education reform lead to deeper learning.
### State Board Action 2: Develop High-Quality Professional Learning Systems.

<table>
<thead>
<tr>
<th>Policy Action</th>
<th>State Examples</th>
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</thead>
<tbody>
<tr>
<td>Standards for teacher preparation programs that highlight deeper learning competencies</td>
<td><strong>Kentucky</strong> is revising its teacher preparation programs to incorporate program designs that focus on the instructional practices necessary in competency-based environments. The redesign will occur by the start of AY 2014-15.</td>
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<tr>
<td>Ensuring licensure and relicensure of teachers, including through alternative licensure models, support educator competencies leading to student deeper learning</td>
<td><strong>Delaware</strong>: “Professional development activities submitted for license renewal must be aligned with the Delaware Teaching Standards, the Delaware Administrator Standards or national specialist standards.” Delaware Teaching Standards incorporate principles outlined in InTASC Model Core Teaching Standards, including those about creating learning environments for personalized and collaborative learning, supporting different approaches to student learning, application of content (e.g., critical thinking).</td>
</tr>
<tr>
<td>Incorporating development of quality instructional practices that lead to deeper learning in teacher and leader induction and mentoring experiences</td>
<td>North Carolina Mentor Program: Beginning Teacher Guidelines for the 21st Century Professional, authored by the State Board of Education and Department of Public Instruction, Educator Recruitment and Development Division, outlines quality instructional and professional practices and how mentors could help teachers attain mastery of these practices.</td>
</tr>
<tr>
<td>Inclusion of deeper learning competencies within state professional learning standards</td>
<td><strong>New Hampshire</strong> is supporting educators in understanding how the roles of educators change when transitioning to a competency-based system and providing competency-based learning tools to succeed in this new system. Delaware’s professional learning standards include professional learning communities committed to continuous improvement, collective responsibility, and goal alignment to increase educator effectiveness and results for all students.</td>
</tr>
</tbody>
</table>
RESOURCES

1. **The Design of Teacher Education Programs**
   **Authors:** Linda Darling-Hammond, Karen Hammerness, with Pamela Grossman, Frances Rust, Lee Shulman
   **Summary/Relevance:**
   This article informs states on the central issues in curriculum and program design for teacher education programs. The authors discuss issues of content and coherence, as well as concerns about scope and sequence. In addition, the article outlines features of programs that appear to support teacher learning and development. Finally, the article explores “long-standing and emerging pedagogies that are used in teacher education and their implications for teacher learning.”

2. **Educating School Teachers**
   **Author:** Arthur Levine, Education Schools Project
   **Summary/Relevance:**
   This report is part of a series that details the results of a four-year study of America’s education schools, focusing on the education of classroom teachers. It reveals problems with US schools of education, including inadequate preparation, a disarrayed curriculum, a disconnected faculty, low admission standards, insufficient quality control, and disparities in institutional quality. The report then highlights some exemplary teacher education programs and recommends improvements.

3. **Induction into Learning Communities, prepared for the National Commission on Teaching and America’s Future**
   **Authors:** Kathleen Fulton, Irene Yoon, Christine Lee
   **Summary/Relevance:**
   This piece urges a move away from what the authors deem outdated education. It discusses the problems or persistent norms that hinder progress toward 21st century learning. The article suggests the importance of transforming schools into learning communities. It recommends focusing on teacher induction and describes how to create comprehensive induction systems to support 21st century learning communities.

4. **InTASC: Model Core Teaching Standards and Learning Progressions for Teachers 1.0**
   **Author:** CCSSO’s Interstate Teacher Assessment and Support Consortium
   **Summary/Relevance:**
   This report helps to inform teaching standards that help teachers ensure students are college, career and civic ready. It describes a new vision of teaching that caters to the needs of today’s learners, how teaching practice that is aligned with that vision can be developed, and the strategies teachers can adopt to improve their practice both individually and collectively.

5. **Our Responsibility, Our Promise: Transforming Educator Preparation and Entry into the Profession**
   **Author:** A report by the CCSSO Task Force on Educator Preparation and Entry into the Profession
   **Summary/Relevance:**
   This report recommends using state policy levers to transform entry into the education profession, but it calls on the leadership and collaboration of all stakeholders involved in P-20 education. The report covers teacher and principal preparation and entry into professional roles by defining learner-ready teachers and school-ready principals and discussing key actions that stakeholders must take to implement changes in licensure, program approval, and data collection, analysis and reporting.
## DEEPER LEARNING: POLICIES FOR A 21ST CENTURY EDUCATION

**State Board Action 3:** Measure and Account for Deeper Learning.

<table>
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<tr>
<th>Policy Action</th>
<th>State Examples</th>
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</table>
| Implementing high school graduation requirements that call on students to clearly demonstrate competencies through student-driven projects | Maryland’s Service Learning High School graduation requirements. In order to receive a diploma, each Maryland senior must complete a service-learning project that meets seven state-defined best practices, including connecting academics to an applied service activity, ensuring reflection throughout the activity, and developing student understanding of the complexities of the issue, project-specific skills related to the issue, and the importance of civic responsibility.  
Georgia has implemented a new framework, Teacher Assessment on Performance Standards (TAPS), to measure teacher proficiency on a variety of domains including active, differentiated instructional strategies; more effective assessment use; and instructional planning. The TAPS approach is designed to enable administrators to support teachers in improving their practice and supporting deeper content understanding for Georgia’s students.  
Oregon Diploma. In January 2008, the state board of education adopted new high school graduation requirements. These requirements are designed to better prepare each student for success in college, work, and citizenship. To earn a diploma, students now need to successfully complete the credit requirements, demonstrate proficiency in the Essential Skills, and meet the personalized learning requirements. Students will also have the option to earn credit for proficiency. A phase-in schedule (2007–14) was created for the Essential Skills of Reading, Writing, and Math to allow students, families, schools, and teachers to prepare to meet the requirements.  
Ohio Performance Assessment Pilot Project is designed to pilot the use of performance assessments in classrooms. Ohio’s Task Dyad system uses both learning and assessment tasks. The learning tasks are intended to be used as formative tools, and these are designed to give students an opportunity to learn the skills and knowledge that will be assessed in assessment tasks. |
| Providing evaluation and support systems for teachers based on clearly defined and communicated rubrics that highlight teachers’ ability to collaborate and support deeper learning |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Adopting or developing multiple-measure, holistic accountability systems that credit schools for providing students a well-rounded education aligned to and accountable for student postsecondary success |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Ensuring that information at all levels is not only summative data that are reflected on retrospectively but also formative data, including more authentic assessments of student learning |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

**RESOURCES**

1. **Criteria for High Quality Assessments**

   **Authors:** Linda Darling-Hammond, Joan Herman, James Pellegrino, and others. A collaborative piece between the Stanford Center for Opportunity Policy in Education at Stanford University, the Center for Research on Student Standards and Testing at UCLA, and the Learning Sciences Research Institute of the University of Illinois at Chicago.

   **Summary/Relevance:**
   The piece elaborates on five standards for high-quality assessments: assess higher-order cognitive skills and educational transfer; gauge 21st century skills acquisitions; ensure assessments are internationally benchmarked; ensure assessments are instructionally sensitive and educationally valuable; and ensure they are valid, reliable, and fair.
2. Creating a Comprehensive System for Evaluating and Supporting Effective Teaching

Authors: Linda Darling-Hammond, with the assistance of Chana Cook, Ann Jaquith, and Madlene Hamilton, from the Stanford Center for Opportunity Policy in Education.

Summary/Relevance:
As this article discusses an integrated approach to adopting a comprehensive professional development system meant to improve teachers’ effectiveness for “all teachers at every stage of their careers,” it helps to inform states about how they can adopt a more holistic accountability system that supports student postsecondary success.

3. Education for Life and Work

Author: James Pellegrino, Margaret Hilton, and others (Board on Testing and Assessment, Board of Science Education, and Division of Behavioral and Social Sciences and Education at the National Research Council of the National Academies).

Summary/Relevance:
The report comprehensively presents research on knowledge, skills, and dispositions necessary for 21st century success. As part of the report, chapter 6 (specifically pages 6–27 to 6–33) discusses considerations for assessments.

4. Creating Systems of Assessment for Deeper Learning

Authors: David Conley and Linda Darling-Hammond. This is a collaborative piece between the Stanford Center for Opportunity Policy in Education and the Educational Policy Improvement Center.

Summary/Relevance:
This piece emphasizes assessment systems rather than individual assessments. The piece explores limitations of different assessment types, provides international and state best practices, and the comprehensive policy supports that lead to high-quality assessments.


Authors: Ace Parsi, National Association of State Boards of Education; and Linda Darling-Hammond, the Stanford Center for Opportunity Policy in Education

Summary/Relevance:
This piece discusses the roles and benefits of performance assessments as a resource, barometer, and engine driving student learning. In addition to state examples, the paper specifies policy considerations states must consider to ensure the success of these assessments, including purpose, reliability, equity, accountability, educator capacity, policy alignment, implementation, and sustainability.


Authors: Center for American Progress and the Council for Chief State School Officers

Summary/Relevance:
This collaborative piece provides a thoughtful framework for reconsidering 21st century accountability systems. Filled with state examples, the brief describes key dimensions of this accountability system, which include measuring progress toward college and career readiness; diagnosing and responding to challenges via school-based quality improvement; systems of support and intervention; resource accountability; and professional accountability.

7. Accountability for College and Career Readiness: Developing a New Paradigm

Authors: Linda Darling-Hammond from the Stanford Center for Opportunity Policy in Education, and Gene Wilhoit and Linda Pittenger from the National Center for Innovation in Education

Summary/Relevance:
This article informs states about how they can adopt more holistic accountability systems that support student postsecondary success. It recommends “an accountability approach that focuses on meaningful learning, enabled by professionally skilled and committed educators, and supported by adequate and appropriate resources, so that all students regardless of background are prepared for both college and career when they graduate from high school,” and proposes principles for successful accountability systems.


Author: Council of Chief State School Officers

Summary/Relevance:
This piece draws on CCSSO’s 2011 accountability principles and offers state policymakers a series of guiding questions, including sample options, potential trade-offs, and state examples.
## State Board Action 4: Provide Flexibility to Innovate.

<table>
<thead>
<tr>
<th>Policy Action</th>
<th>State Examples</th>
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</thead>
<tbody>
<tr>
<td>Developing the state’s vision for an education that prepares all students for college, career, and civic success</td>
<td>New Hampshire has adopted a definition of College and Career Readiness, including knowledge, skills, and dispositions, which it has embedded in the state’s ESEA waiver and accountability model. The state board of education has adopted the definition and plans to follow up with legislation.</td>
</tr>
<tr>
<td>Passing policy that enables local districts and schools to expand who delivers learning and where, when, and how learning takes place (and what)</td>
<td>The Colorado State Board of Education revised the state's graduation requirements in May 2013, putting in place a menu of competency-based requirements that districts may select from in crafting new diploma policies, beginning with the graduating class of 2021. Before, there were no state-level requirements for districts in setting their diploma policies other than a semester-long course in civics. These new requirements place emphasis on students' mastery of content rather than seat time. The state created “graduation guidelines,” outlining ways in which students can demonstrate mastery in the four major content areas (English, math, social studies, and science), such as earning a certain score on the ACT, Partnership for Assessment of College and Career Readiness (PARCC) or statewide assessment; passing a concurrent/dual enrollment course; or passing an AP/IB exam. The menu also includes demonstrations of competency, including capstone experiences and obtaining an approved industry certificate. Local education agencies are expected to set their own district-level requirements in alignment with the state policy. Districts may select multiple pathways from the menu in creating their diploma policies, thus signaling the importance of personalized progressions, all with high bars of rigor. Additionally, Ohio has introduced a Credit Flexibility policy, which provides students options for fulfilling requirements for earning high school credit(s).</td>
</tr>
<tr>
<td>Providing local districts and schools waivers, creating innovation zones, or sparking pilot programs to try out new policies</td>
<td>Kentucky Districts of Innovation KRS 156.108 and 160.107 (House Bill 37, enacted 2012) provide Kentucky public school districts the opportunity to apply to the Kentucky Board of Education to be exempt from certain administrative regulations and statutory provisions, as well as waiving local board policy, in an effort to improve the learning of students. By “rethinking” what a school might look like, districts will be able to redesign student learning in an effort to engage and motivate more students and increase the numbers of those who are college and career ready. In addition to providing flexibility, a number of state efforts have provided resources for local stakeholders to engage in innovation. Notable state efforts in this arena include Ohio’s Straight A’s Fund.</td>
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<tr>
<td>Guiding and/or monitoring implementation plans of new state policies</td>
<td>West Virginia State Board of Education is one example of a board that not only adopts policy but also remains an active partner in the implementation of policy. Among other policies, this was the case in the adoption of the state’s Policy 2510, Assuring Quality of Education; Regulations for Education Programs, where the board began to remove restrictive requirements around time and provided local autonomy in decision making around student needs. The board has monitored this policy regularly and revises as necessary (on average every two years) with the most current revisions enacting personalized education pathways for high school students based upon career aspirations.</td>
</tr>
</tbody>
</table>
RESOURCES

1. Innovation Implementation, Overcoming the Challenge
   **Authors:** Katherine J. Klein and Andrew P. Knight from the Wharton School of University of Pennsylvania
   **Summary/Relevance:** This article reviews the reasons why implementation of innovation in general is so challenging for many organizations, and it describes the organizational characteristics that enhance the effectiveness of innovation implementation, including a positive climate, financial resources, a learning orientation, and management support for implementation.

2. Expanded Learning Opportunities: A More Comprehensive Approach to Preparing High School Students for College and a Career
   **Author:** Alliance for Excellent Education
   **Summary/Relevance:** This brief discusses how entrenched conceptions of education can be significant impediments to the type of learning students need to succeed in college, career, and civic life. The brief posits that policymakers can expand who delivers learning beyond educators to include employers, community leaders, parents, and postsecondary institutions, where learning is delivered to areas beyond the school grounds, when learning happens to beyond the school day and year, and how learning happens to move beyond traditional lecture formats to encompass more hands-on, applied methods.

3. Clearing the Path: Creating Innovation Space for Serving Over-Age, Under-Credited Students in Competency-Based Pathways
   **Authors:** Chris Sturgis (from MetisNet), Bob Rath (from Our Piece of the Pie), Ephraim Weisstein (from Schools for the Future), and Susan Patrick (from International Association for K-12 Online Learning).
   **Summary/Relevance:** This article explores how states can create space for innovation, including a review of design principles, minimum policy conditions, and options for moving forward and how these elements apply to competency-based approaches. The authors argue that states can nurture innovation by increasing flexibility in the policy environment, providing technical assistance, supporting peer networks, and evaluating innovative models.

4. Measuring Innovation in Education: A New Perspective
   **Authors:** Stéphan Vincent-Lancrin, Kiira Karkkainen, Sebastian Pfotenhauer, Adele Atkinson, Gwenael Jacotin, and Michele Rimini from the Center for Educational Research and Innovation, OECD.
   **Summary/Relevance:** This article offers a new perspective on measurement of educational innovation by comparing innovation in education with that in other sectors and identifying specific innovations across educational systems. This report includes metrics to examine the relationship between educational innovation and changes in educational outcomes, and hence it is a valuable resource that could help states guide and/or monitor policy implementation plans.

5. Advancing Competency-Based Pathways to College and Career Readiness: A State Policy Framework for Graduation Requirements, Assessment and Accountability
   **Authors:** Competency-Based Pathways Working Group, Achieve, Inc.
   **Summary/Relevance:** This piece points to how states can build a policy structure that contributes to statewide adoption and implementation of competency-based pathways that support all students’ college and career readiness. Its frameworks focus on three areas: (1) graduation requirements, (2) summative assessment, and (3) accountability. Also, this piece calls for building a common state vision to inform the state’s policy decisions and offers a vision exercise at the beginning of the article.
State Board Action 5: Facilitate Systemic Change.

<table>
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<th>Policy Action</th>
<th>State Examples</th>
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<tbody>
<tr>
<td>Developing and communicating a vision of college, career, and civic success that subsequently organizes state education initiatives toward a common goal</td>
<td>Maine’s State Department of Education, Legislature, and State Board of Education have communicated a new and consistent vision of college, career, and civic readiness around Maine’s Guiding Principles that include key skills students need to succeed, such as effective communication, creative problem solving, life-long learning, and responsible citizenship. Upon acceptance of these principles, the state has moved to align all other policies to this vision and communicate this vision across the state. For the whole story, refer to the following NASBE State Education Standard article.</td>
</tr>
<tr>
<td>Establishing stakeholder engagement around state education initiatives that elicits early investment</td>
<td>Hawaii’s P-20 initiative nurtures cross-agency partnerships and continuously engages partners in a broad array of policies and activities designed to increase alignment between K-12 and higher education, one of which is the development of a statewide definition of College Career and Community Readiness.</td>
</tr>
<tr>
<td>Conducting policy audits that ensures policy implementation and monitoring are transparent and build toward continuous learning at both the local and state level</td>
<td>The Washington, DC, State Board of Education has begun to develop a new standards review protocol to ensure that each of its standards is aligned to the knowledge, skills, and dispositions that students need to succeed. The DC Board has begun this formalized process on its health standards and is working to ensure the process it defines is transportable to other standards as well. Kentucky’s Department of Education and State Board of Education conduct a yearly superintendent summit where they convene all district superintendents across the state to engage in learning, communicating policies and getting feedback on current policy implementation challenges across the state.</td>
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<td>Creating more seamless connections across early childhood, K-12, postsecondary, and workforce development systems</td>
<td>In its new competency-based education system, New Hampshire has worked to implement an integrated learning system. The state intends to create stronger connections between pre-K, K-12, postsecondary, and workforce systems (see value 4, New Hampshire: Our Story of Transformation).</td>
</tr>
</tbody>
</table>
RESOURCES

1. State Policy to ... Inspire?
   **Author:** Jennifer Davis Poon, Director of the Innovation Lab Network at the Council of Chief State School Officers.
   **Summary/Relevance:**
   The author discusses the policymaker’s role in the move toward deeper learning. The author addresses how policies can be crafted to inspire innovation, and she includes sections on “framing a common vision,” “removing policy barriers,” “encouraging local design work,” and “implementing structures for supporting and scaling local innovation.”

   **Authors:** Monica Martinez and Dennis McGrath
   **Summary/Relevance:**
   In order for states to transform systems to enable schools to support deeper learning, state policymakers must first understand what deeper learning schools do and how they function. In this brief book, Martinez and McGrath highlight systemic changes in eight innovative public schools that are providing students deeper learning experiences. The authors highlight common themes across these schools, such as a clear vision of what deeper learning means, flatter hierarchies in decision making, aligned structures, and engaging experiences for each student. Martinez has also created a planning guide to support school and districtwide transformation toward deeper learning: http://dlplanningguide.com/.

   **Author:** Bernie Trilling
   **Summary/Relevance:**
   This article presents a prism model of the deeper learning ecosystem, identifying common themes of teaching and learning practices that have succeeded in efforts to develop 21st century competencies. Using many examples to illustrate key points of transformation, the author discusses the six stages of the educational transformation cycle and provides a step by step guide to facilitating deeper learning.

4. Knowledge, Skills, and Dispositions: The Innovation Lab Network State Framework for College, Career, and Citizenship Readiness, and Implications for State Policy
   **Author:** Council of Chief State School Officers
   **Summary/Relevance:**
   This article not only highlights the research behind the knowledge, skills, and dispositions aligned to college, career, and civic success, it also discusses levers in state policy that effect change in this system.

   **Authors:** Helen A. Soulé and Steven Paine
   **Summary/Relevance:**
   This article discusses six primary levers to influence and significantly transform education systems. The authors also identify key questions state offices need to raise as they prepare to advance the 21st century skill agenda, and they cite best-practice examples of system transformation for deeper learning.
The National Association of State Boards of Education represents America’s state and territorial boards of education. Our principal objectives are to strengthen state leadership in education policymaking, advocate equality of access to educational opportunity, promote excellence in the education of all students, and ensure responsible lay governance of education. Learn more at www.nasbe.org.