



DIGITAL LEARNING NOW!



TABLE OF CONTENTS

ROADMAP FOR REFORM

About the 10 Elements of High Quality Digital Learning	3
About the Roadmap for Reform	4
Tips for Using the Roadmap for Reform	4
Understanding Digital Learning	5

BUILDING A BOLD AGENDA

Building a Bold Agenda	7
------------------------------	---

NUTS-AND-BOLTS POLICIES

Element 1: Student Access	9
Element 2: Barriers to Student Access	10
Element 3: Personalized Learning	11
Element 4: Advancement	14
Element 5: Quality Content	15
Element 6: Quality Instruction	16
Element 7: Quality Choices	17
Element 8: Assessment and Accountability	19
Element 9: Funding	21
Element 10: Infrastructure	22





ROADMAP FOR REFORM

ABOUT THE ROADMAP FOR REFORM

In 2011, the Foundation for Excellence in Education developed a Roadmap for Reform to guide Governors, chief state school officers and lawmakers as they adopt policies to transform education for the digital age. The Roadmap for Reform has three sections:

- **Nuts-and-Bolts Policies:**

This section outlines the specific policies to achieve each Element. Based on the framework established by the *10 Elements of High Quality Digital Learning*, the roadmap defines 72 explicit measures that, when taken as a whole, will transform education for the digital age.

- **Building a Bold Agenda:**

This section outlines complementary measures that can be advanced together to optimize success. Many of the reforms are interconnected and, when adopted in combination with other reforms, can provide transformational results.

- **State Digital Learning Report Card:**

To help state leaders get started on the road to reform, the Foundation for Excellence in Education assessed each state's alignment to the 72 measures. The Report Card uses three levels of attainment – *Achieved*, *Partial* and *Not Yet*. *Achieved* indicates that the state has adopted the measure through law, rule or indisputable practice. *Not Yet* indicates that the state has no policy, a permissive policy that isn't effectively achieving the vision or a policy that conflicts with the measure. *Partial* indicates the entire range of policies and circumstances between *Not Yet* and *Achieved*.

TIPS

FOR USING THE ROADMAP FOR REFORM:

- State leaders can use their Report Card to identify areas that need improvement and then refer to the corresponding section of the Roadmap for Reform to gain insights and ideas for advancing reform. (No need to read where you have already Achieved!)
- State leaders can refer to other states' Report Cards to find examples of what works.
- State leaders can refer to Building a Bold Agenda to identify ways to combine policies into a cohesive and comprehensive package of reform.
- State leaders can tap advocates and experts in their state and around the nation to create a plan and build support for their reform agenda.



ROADMAP FOR REFORM

UNDERSTANDING DIGITAL LEARNING

Digital learning is learning facilitated by technology that gives students some element of control over time, place, path and/or pace.

- **Time:** Learning is no longer restricted to the school day or the school year. The Internet and a proliferation of Internet access devices have given students the ability to learn anytime.
- **Place:** Learning is no longer restricted within the walls of a classroom. The Internet and a proliferation of Internet access devices have given students the ability to learn anywhere and everywhere.
- **Path:** Learning is no longer restricted to the pedagogy used by the teacher. Interactive and adaptive software allows students to learn in their own style, making learning personal and engaging. New learning technologies provide real-time data that gives teachers the information they need to adjust instruction to meet the unique needs of each student.
- **Pace:** Learning is no longer restricted to the pace of an entire classroom of students. Interactive and adaptive software allows students to learn at their own pace, spending more or less time on lessons or subjects to achieve the same level of learning.

Digital learning is more than just providing students with a laptop. Digital learning requires a combination of technology, digital content and instruction.

- **Technology:** Technology is the mechanism that delivers content. It facilitates how students receive content. It includes Internet access and hardware, which can be any Internet access device – from a desktop to a laptop to an iPad to a smartphone. Technology is the tool, not the instruction.
- **Digital Content:** Digital content is the high quality academic material which is delivered through technology. It is *what* students learn. It ranges from new engaging, interactive and adaptive software to classic literature to video lectures to games. It isn't simply a PDF of text or a PowerPoint presentation.
- **Instruction:** Educators are essential to digital learning. Technology may change the role of the teacher but it will never eliminate the need for a teacher. With digital learning, teachers will be able to provide the personalized guidance and assistance to ensure students learn and stay on track – throughout the year and year after year – to graduate from high school. Teachers may be the guide on the side, not the sage on the stage.



ROADMAP FOR REFORM

Digital learning can be full-time online, part-time online or in a blended brick-and-mortar setting.

- **Full-time online:** Full-time digital learning offers a high quality education to students who can't attend a brick-and-mortar school for medical causes, such as physical disabilities or acute allergies, or other reasons, such as bullying, as well as for parents who want to educate their children at home and for motivated students who are innately driven to learn. Students and teachers are not in the same location.
- **Part-time online:** Providing the ability for students to enroll in individual online courses allows students to customize their education to meet their particular needs and interests – course-by-course. Part-time digital learning allows students to combine online learning with onsite learning. Students and teachers are not in the same location for the individual online course.
- **Full-time blended:** Full-time blended schools combine digital learning with other modes of learning, such as instruction facilitated by a teacher, group discussion, project-based learning and one-on-one tutoring, in a supervised setting. Students and teachers are in the same location.

Digital learning ensures students are never bored and never left behind. Students who excel in a subject can move ahead academically. Conversely, students who are struggling in a particular subject can spend extra time mastering those skills with guidance from their teacher – either remotely or face-to-face. In schools that adopt blended learning, these students can remain in the same class as their peers even as their individual learning takes them on different paths.

Special thanks to the sponsors of Keeping Pace with K12 Online Learning 2011 for providing these draft statistics on enrollment in digital learning. The enrollment data are estimates for the 2010-11 school year, based on the forthcoming report which will be released in November 2011. Data includes enrollments in state virtual schools and full-time online schools that operate regionally or across a state, as these are the schools that are typically available to all students in a state. Single-district schools are not included. For full-time schools, the number is unique students, most of whom take all of their courses from the online school. For state virtual schools, course enrollments, equal to one student taking one semester-long course, are included. Data on blended learning programs is not included. Data on enrollment in individual online courses at the district level is not included.

MULTI-DISTRICT ONLINE SCHOOLS

STATE	FULL-TIME	PART-TIME
Alabama	*	33,434
Alaska	*	*
Arizona	36,814	*
Arkansas	500	3,130
California	15,000	*
Colorado	14,932	1,549
Connecticut	*	200
Delaware	*	*
Florida	4,000	259,928
Georgia	5,000	12,814
Hawaii	1,500	1,486
Idaho	5,223	14,481
Illinois	*	3,020
Indiana	500	*
Iowa	*	1,053
Kansas	4,891	*
Kentucky	*	1,716
Louisiana	*	8,578
Maine	*	*
Maryland	*	*
Massachusetts	500	*
Michigan	1,000	17,700
Minnesota	9,559	*
Mississippi	*	3,476
Missouri	700	1,335
Montana	*	4,551
Nebraska	*	*
Nevada	7,420	*
New Hampshire	*	11,542
New Jersey	*	*
New Mexico	*	3,816
New York	*	*
North Carolina	*	88,716
North Dakota	*	*
Ohio	31,142	*
Oklahoma	4,456	*
Oregon	8,000	*
Pennsylvania	28,578	*
Rhode Island	*	*
South Carolina	5,600	17,186
South Dakota	*	3,924
Tennessee	1,320	3,833
Texas	6,000	17,118
Utah	1,572	10,384
Vermont	*	247
Virginia	*	6,352
Washington	17,786	*
West Virginia	*	3,177
Wisconsin	4,328	3,381
Wyoming	1,000	*
TOTAL	217,321	538,127

* = No data available



BUILDING A BOLD AGENDA

To create a high quality digital learning environment, the Foundation for Excellence in Education recommends states adopt policies to implement all 72 metrics of the 10 elements. To assist states move toward the ultimate goal, the Foundation has created “policy combo-packs” that mix and match complementary policies that will accelerate the transition to a high-performing, high-achieving, world-class education. For example, states that want to create a college and career ready high school diploma should consider legislation that addresses metrics 8, 31 and 32. Doing multiple reforms in the right combination will amplify and accelerate the results.

The policy combo-packs can also provide a path for multi-year reform agendas. Governors, lawmakers and policymakers can develop a clear path for transformation, communicate the vision to parents and the public, and advance reforms sequentially and systematically to ensure an organized and orderly transition. Change won’t happen overnight, but it won’t happen at all unless steps are taken every year to improve.

In developing their plans, states should adopt a sense of urgency around certain policy areas:

- establishing a competency-based education that requires students to demonstrate mastery of the material,
- providing a robust offering of high quality courses from multiple providers,
- ending the archaic practice of seat-time,
- funding education based on achievement instead of attendance,
- funding the student instead of the system,
- eliminating the all-too-common practice by school districts of prohibiting students from enrolling with approved providers, either by withholding funding or credit, and
- breaking down the barriers, such as teacher-student ratios and class size limits, to effective, high quality instruction.

Most importantly, states should measure the range and results of digital learning. States should collect data on how many students are enrolled in digital learning, where students are enrolled, types of digital learning being used and how well students perform in those courses and schools. Linking this information to student achievement outcomes will provide the empirical bases for identifying success technologies and strategies.

While learning should be blended, data should not. Data should be disaggregated to make it easier for lawmakers and policymakers to understand what’s really happening. For example, reporting systems should differentiate between enrollments in blended brick-and-mortar schools and individual online courses to determine which schools or individual online course providers are performing better than others.



BUILDING A BOLD AGENDA

Disaggregated data also allows apple-to-apple comparisons. Without the appropriate context, an online credit recovery program with graduation rates lower than the state average may be considered a failure. However, when compared to brick-and-mortar schools that didn't graduate any of the same students, even lower-than-average graduation might be considered a success.

Ultimately, data provides the empirical basis for lawmakers and policymakers to develop sound policy.

Create a 21st Century College and Career Ready High School Diploma

- Require Online Courses to Earn a Diploma (8)
- Adopt Competency-Based Promotion (31, 32)
- Fund Digital Learning in the Formula (14, 15, 16)

Empower Students to Customize Education for Individual Student Success

- Empower Students and Parents with Decisions (15, 16, 55)
- Provide a Robust Offering of High Quality Choices (35-36, 42-53)
- End Barriers to Access (3, 4, 12, 13, 17, 18)
- Foster Blending Learning (22-28)
- Fund Digital Learning in the Formula (14, 15, 16)

End the Achievement Gap

- Adopt Test-Based Promotion (31, 32)
- End Seat-Time (34)
- Adopt Performance-Based Funding (63)
- Fund Digital Learning in the Formula (14, 15, 16)

Support High Achievers

- Foster Acceleration for Middle School Students (23, 29, 30)
- Foster Acceleration for High School Students (29, 30, 33)
- End Seat-Time (34)
- Fund Digital Learning in the Formula (14, 15, 16)

Extend the Reach and Results of Great Teachers

- Recruit and Retrain Effective Educators (37, 38, 39, 62)
- Provide Teachers with Ability Support for Digital Learning (40, 41, 68, 69)
- Replace Class-Size Limits with Workload Guidelines (9, 10, 11)

Modernize Infrastructure

- Administer Tests Digitally (56, 57)
- Provide Content Digitally (64, 67)
- Provide Internet Access Devices (68, 70)

Ensure a Quality Education for All Students

- Provide a Robust Offering of High Quality Choices (35-36, 42-50, 53)
- Demand Accountability for Student Learning (58-61)



ELEMENT 1:

STUDENT ACCESS: ALL STUDENTS ARE DIGITAL LEARNERS.

ACTION: *State ensures access to high quality digital content, online courses and virtual schools to all students.*

Metrics 1 - 4 deal with the type of students who are eligible for publicly-funded digital learning.

Students: Public, Charter, Private, Home Education

1. Under state law, district public school students are eligible for publicly-funded digital learning.
2. Under state law, charter public school students are eligible for publicly-funded digital learning.
3. Under state law, private school students are eligible for publicly-funded digital learning.
4. Under state law, home education students are eligible for publicly-funded digital learning.

Publicly-funded digital learning should be available to all students who are eligible for publicly-funded education. Students enrolled in private school and home education programs should have the same access to publicly-funded digital learning as full-time public school students.

Many states already allow home education students to enroll in full-time digital learning, either as a public school student or not. When home education students enroll as public school students, they may have to meet additional state requirements, such as taking state standardized tests.

States can expand access by allowing private school and home education students to enroll in individual online courses. Providing access to publicly-funded digital learning on a part-time basis may be more cost-effective than providing a full-time education to students who are eligible but not currently enrolled in public school.

ACTION: *State ensures access to high quality digital content, online courses and virtual schools to students in K-12 at any time in their academic career.*

Metrics 5 – 7 deal with ensuring availability of digital learning for all students in every grade from kindergarten through high school.

Grades: High School, Middle School, Elementary School

5. State law ensures publicly-funded digital learning is available for all high school students.
6. State law ensures publicly-funded digital learning is available for all middle school students.
7. State law ensures publicly-funded digital learning is available for all elementary school students.

States are using a variety of approaches to ensure availability of digital learning to all students, including establishing a statewide public school district like Florida Virtual School, creating a statewide virtual program with multiple providers and authorizing virtual charters that are open to students statewide. Requiring all districts to provide a virtual program to their students or expanding access to existing district programs to all students will also achieve universal access.

States can accelerate the transition to digital learning by requiring all school districts to implement a plan to transition all schools to a blended model. Within the decade, the school that does not offer blended learning should be the exception, not the norm.

ACTION: *State requires students take high quality online college-or career-prep courses to earn a high school diploma.*

Metric 8 deals with ensuring all students experience digital learning.

Diploma Requirement

8. State law requires students to complete at least one online course to earn a high school diploma.

States can also achieve universal access by requiring all students in every grade to take an online course. Introducing this requirement in high school is vitally important to preparing students for the digital workplace they will enter after graduation. The availability of high quality online courses in higher grades across the nation makes it possible to implement this requirement immediately.



NUTS-AND-BOLTS POLICIES

ELEMENT 2:

BARRIERS TO STUDENT ACCESS: ALL STUDENTS HAVE ACCESS TO HIGH QUALITY DIGITAL LEARNING.

ACTION: *State does not restrict access to high quality digital content, online courses and virtual schools with policies such as class size ratios and caps on enrollment or budget.*

Metrics 9 – 16 deal with man-made policy barriers that restrict access to digital learning.

Class-Size and Teacher Ratios

9. Under state law, class size restrictions and/or teacher-student ratios for traditional classrooms do not apply to virtual schools (full-time).
10. Under state law, class size restrictions and/or teacher-student ratios for traditional classrooms do not apply to individual online courses (part-time).
11. Under state law, class size and/or teacher-student ratios for traditional classrooms do not apply to blended brick-and-mortar schools.

Digital learning tears down the greatest barrier to providing a high quality education to each and every student – access to rigorous curriculum taught by effective educators. With digital learning, all students – particularly those in rural regions or urban areas that suffer chronic shortages of highly effective teachers in rigorous courses – can access the same high quality education typically enjoyed by students in affluent suburban neighborhoods.

Technology has solved the natural barrier of geography, now states should tear down the man-made policy barriers that block access to a high quality education. States can eliminate class-size and teacher ratios used in traditional classrooms by differentiating and dividing the roles of a conventional classroom teacher. For example, certified teachers can maintain the primary role of instructor while paraprofessionals assume the responsibility of classroom management and computer lab support.

Similarly, replacing the bean-counter approach to class-size and teacher-student ratios with policies that address

workload will benefit both teachers and students. For example, experienced teachers may be able to handle more students than educators just entering the profession and students who require more instructional support should be considered when determining the workload of teachers.

Enrollment Caps

12. State law does not cap enrollment in charter schools, including virtual and brick-and-mortar. (full-time).
13. State law does not cap enrollment in individual online courses (part-time).

Capacity – not caps on enrollment and budget – should determine who gets access to digital learning. Arbitrary and artificial limits create a disparity among students who all deserve access to the same high quality education. States should remove enrollment caps and allow the market to develop ways to meet the demand for high quality digital learning.

Budget

14. State funding for digital learning is provided through the public per pupil school funding formula.

Digital learning should be funded through the state per-pupil funding formula. As long as states provide funding through a special line item appropriation, digital learning will remain a supplemental resource subject to elimination based on the rise and fall of state and local revenue. Additionally, line-item funding means states are paying double for the same course – once in the per pupil funding formula and once in the line-item funding. That isn't scalable or sustainable.

District Approval

15. Under state law, school districts do not have the authority to prohibit a student from enrolling in virtual school (full-time).
16. Under state law, school districts do not have the authority to prohibit a student from enrolling in individual online courses (part-time).



NUTS-AND-BOLTS POLICIES

Districts should not have the ability to deny access to approved virtual schools and individual online courses. Ironically, many states allow students to enroll in full-time virtual school without approval from the school districts but don't allow students to enroll in an individual online course without their consent. Unfortunately, well-intended policies that require guidance from the education establishment often result in an insurmountable obstacle for students to select the best option.

ACTION: *State does not restrict access to high quality digital content, online courses and virtual schools based on geography, such as school district, county, or state.*

Metrics 17 and 18 deal with geographic barriers that restrict access to digital learning.

Geographic Barriers

17. State law does not limit enrollment in virtual schools and individual online courses to district boundaries.
18. State law does not limit enrollment in virtual charter schools to the county of charter.

Geography is fundamentally irrelevant to providing a high quality education in the digital age. Digital learning allows knowledge and instruction to cross district boundaries, state lines and international borders. Where students and teachers live doesn't matter. States should erase the political borders that block access to a high quality education.

ELEMENT 3:

PERSONALIZED LEARNING: ALL STUDENTS CAN USE DIGITAL LEARNING TO CUSTOMIZE THEIR EDUCATION.

ACTION: *State allows students to take online classes full-time or part-time (by the individual course).*

Metrics 19 – 25 deal with the availability of publicly-funded full-time and part-time online digital learning.

Full-time: High School, Middle School and Elementary School

19. State law ensures full-time virtual school is available for all high school students.
20. State law ensures full-time virtual school is available for all middle school students.
21. State law ensures full-time virtual school is available for all elementary school.

Many states provide students with the option to enroll full-time in a virtual school. This option is primarily used by home education students and students who cannot physically attend a brick-and-mortar school. States that want to begin offering full-time enrollment in virtual school can do so immediately by selecting from several existing and

experienced providers – including public, not-for-profit and for-profit providers – from around the nation.

Part-time: High School, Middle School and Elementary School

22. State law ensures individual online courses are available for all high school students.
23. State law ensures individual online courses are available for all middle school students to earn high school credit.
24. State law ensures individual online courses are available for all middle school students.
25. State law ensures individual online courses are available for all elementary school students.

A robust catalogue of individual online courses in every subject, in every grade is essential to customizing education for each and every student. In today's increasingly competitive global economy, there is no excuse for not giving every student access to every foreign language and every rigorous science, technology, engineering and math course available.



NUTS-AND-BOLTS POLICIES

States that want to provide individual online courses can tap into a national network of existing and experienced individual online course providers. States can start by offering credit recovery courses or rigorous Advanced Placement courses, which will address critical demand from struggling and high achieving students. States that already offer courses in these niche areas should expand their digital offerings to mainstream students.

ACTION: *State allows students to enroll with multiple providers and blend online courses with onsite learning.*

Metrics 26 – 27 deals with students' ability to personalize the time, place, path and pace of their education.

Virtual Blending

26. Under state law, students may enroll in both individual online courses and traditional face-to-face brick-and-mortar schools.

27. Under state law, students may enroll with more than one individual online course provider.

Blended learning allows students to mix-and-match their courses to maximize their education. Students can access rare and rigorous courses. Foreign languages – from French to Farsi – become accessible for students to learn and cost-effective for school districts to offer. Advanced courses in science and math are available everywhere.

Digital learning eliminates scheduling conflicts and opens up opportunities for learning outside school. Students no longer have to choose between courses that are offered at the same time. Students can schedule their courses around internships and jobs, blending not just education but work experience.

States should encourage, even require, students to blend their learning. Policies that make it unduly difficult for students to blend their learning should be eliminated or modified. The greater the diversity and availability of individual online courses provides the opportunity for students to create a rich and rewarding education for themselves.

Metric 28 deals, primarily, with students' ability to personalize the path and pace of their education.

Blended Brick-and-Mortar Schools

28. State law explicitly defines blended brick-and-mortar schools.

Because full-time enrollment in a virtual school is not an option for the overwhelming majority of students in working families, states must find ways to offer digital learning in a supervised setting.

Charter schools are the vanguards of innovative blended learning models. In some schools, core instruction is delivered on computers and the knowledge is then applied and honed in workshops or groups led by teachers. In other schools, core instruction is delivered by teachers and students practice and hone their skills using interactive software on computers. Instructors can use data on student performance to determine the type of instruction that best fits each student. The potential combinations of blended learning are endless.

Defining blended schools simply – such as digital learning combined with other modes of learning in a brick-and-mortar school – will allow schools to innovate and adapt to best meet the needs of their students. A prescriptive definition will smother innovation, while no definition will likely lead to no action at all.

Public schools, today, can create the space and provide the infrastructure within existing school buildings to accommodate and expand digital learning. Often called learning labs, these rooms provide computers for students to access learning technologies at the school or to enroll and participate in online courses outside the school.

ACTION: *State allows rolling enrollment year round.*

Metric 29 deals, primarily, with the ability of students to personalize the pace of their education.

Enrollment Timeframe

29. Under state law, students may enroll in an individual online course anytime during the year and the course starts when they start.



NUTS-AND-BOLTS POLICIES

Digital learning makes it possible for students to start and end courses on different days of the year. To maximize customization, courses should start when a student enrolls – whatever time of year that might be. Rather than “catching up” to the rest of the class or waiting for the next course to begin, students can spend that valuable time learning.

Allowing students to take courses consecutively and continually will accelerate learning. For example, students who take Algebra II immediately after completing Algebra I are less likely to spend valuable time reviewing and regaining knowledge that can be lost when there is a pause of several months in learning.

Rolling enrollment can also be applied to early learning, particularly in reading. Digital learning can maintain the momentum of learning to read during the summer, when many students put down the books and lose ground in gaining critical literacy skills.

ACTION: *State provides all students with access to all approved providers and does not limit provider options for delivering instruction.*

Metric 30 deals, primarily, with the ability of students to determine the path of their education.

Statewide Choices

30. State law provides all students with access to any and all approved providers.

Before the digital age, the debate over school choice revolved around whether it was appropriate, even legal, for states to provide funding for students to attend the school of their choice. In the digital age, customization is evolving from school choice to course choice. Where a student attends school has become less important than determining the best path for students to master the skills and knowledge required by the increasingly competitive global economy. With customization, the path is more likely to be a mosaic than a monolith, with different providers meeting different needs for each individual student.

Digital learning has resolved the most common arguments around providing choices to students. With digital learning, states can require digital content and courses to be aligned to state-adopted standards. States can approve digital content and courses before they become available to students. In fact, many states already provide lots of choices to students.

States should celebrate the diversity and uniqueness of students by providing multiple educational options to all students. Approving lots of digital choices statewide and allowing all students to select from the array of options is an efficient way to provide customization.



NUTS-AND-BOLTS POLICIES

ELEMENT 4:

ADVANCEMENT: ALL STUDENTS PROGRESS BASED ON DEMONSTRATED COMPETENCY.

ACTION: *State requires matriculation of online courses based on demonstrated competency.*

Metrics 31 and 32 deal, primarily, with ending the insidious practice of social promotion.

Test-Based Promotion

31. State law requires students to demonstrate competency on a standardized assessment to advance to the next grade.
32. State law requires students to demonstrate competency on a standardized end-of-course exam to earn credit for a course.

Too often, students are promoted to the next level of learning based on the calendar, not competency. This practice, known commonly as social promotion, moves students along regardless of their readiness for more rigorous material. Rather than “catch up” to their peers, these students are more likely to fall further and further behind.

Because digital learning allows all students to learn at their own pace, it fundamentally eliminates the need for social promotion. Students advance when they demonstrate their mastery of the material – not before.

Requiring a standardized assessment to determine student competency ensures an objective measure of knowledge and skills. To ensure students are ultimately ready for college and careers, states should require students to earn at least a grade level score on all standardized assessments before moving to the next level of learning.

States that embrace digital learning as a tool to support struggling students will accelerate the transition to a competency-based model. Digital learning can minimize the

impact of retention, while maintaining the focus on what’s important – individualized student achievement.

ACTION: *State provides assessments when students are ready to complete the course or unit.*

Metric 33 deals, primarily, with accelerating learning for high achieving students.

Ease of Acceleration

33. State law provides multiple opportunities during the year for students to take an end-of-course exam.

To remain competitive in the global economy, America must produce more high achieving students in science, technology, engineering and math. Digital learning is a tool to advance this national imperative.

With digital learning, high achieving students can accelerate their learning. Students who demonstrate competency in a subject should be encouraged to move to the next level of learning – whether it is a more in-depth exploration of the same subject, the next course in the sequence or a new subject. Students who excel should be propelled forward, not held back for the rest of the class to catch up.

By providing multiple opportunities throughout the year to take an end-of-course exam, states will accommodate and encourage acceleration.

ACTION: *State does not have a seat-time requirement for matriculation.*

Metric 34 deals with the one-size-fits-all mandate of instructional time.



NUTS-AND-BOLTS POLICIES

Seat-Time

- 34.** State law does not require students to complete a defined amount of instructional time to earn a credit. Students earn credits based on completion or competency.

Requiring 180 days of school is arbitrary – it may be good for budgeting purposes, but not for learning. When competency becomes the basis for advancement, requiring students to spend a certain amount of time in a subject becomes

unnecessary and, in fact, unproductive. Students should spend as much time as it takes to master the material – no more and no less. For some, that might mean more time than what is currently required. For others, it will mean significantly less time than presently mandated. Either way, learning will become more productive for each student and education will become more efficient as a whole.

ELEMENT 5:

QUALITY CONTENT: DIGITAL CONTENT AND COURSES ARE HIGH QUALITY.

ACTION: State requires digital content and online and blended learning courses to be aligned with state standards or common core standards where applicable.

Metric 35 deals with ensuring the quality of content.

Standards Alignment

- 35.** State law requires digital content to be aligned with state standards or Common Core State Standards.

Simply, content – whether digital or print – should be aligned to the academic standards adopted by the state. States should not create academic standards specifically for digital content and should not hold digital content to a more rigorous academic standard than print content.

ACTION: State does not discourage digital content with print adoption practice.

Metric 36 deals with the process for approving content.

Content Approval Process

- 36.** State does not have a more rigorous review process for digital content than print content.

Great digital content is 3-dimensional, interactive and adaptive. New learning technologies may look more like a game than a textbook but be equally, or more, effective.

States should consider a reasonable threshold and timeframe that allows new learning technologies to enter education and demonstrate their effectiveness. Requiring providers to share data on the effectiveness of their content, in conjunction with instruction, will shift the focus from inputs to outcomes. What works for students will determine what content is effective.

Replicating the textbook adoption process for digital content will diminish innovation. Creating a data-driven process ensures students will have access to great content.



NUTS-AND-BOLTS POLICIES

ELEMENT 6:

QUALITY INSTRUCTION: DIGITAL INSTRUCTION IS HIGH QUALITY.

ACTION: State provides alternative certification routes, including performance-based certification.

Metrics 37 - 38 deal with recruiting talented individuals into the teaching profession.

Alternative Routes for Teacher Certification

37. State law provides alternative routes for teacher certification.

Performance-Based Teacher Certification

38. State law requires data on student learning to be considered when recertifying teachers.

Digital learning amplifies the need for effective educators especially in high-demand subjects like math, science and foreign language. Digital learning significantly expands the pool of talent available to enter the teaching profession – particularly as part-time educators. With digital learning, experienced professionals – such as scientists, mathematicians and engineers – can teach one online course to hundreds of students from the convenience of their home or office.

Many states provide an alternative route to teacher certification. However, states should review these alternative paths to the classroom and identify opportunities to expand access to the teaching profession in the digital age.

Certifying out-of-state teachers and recertifying all teachers based on student performance ensures all students have an effective teacher. States that want to attract the best and brightest to the teaching profession will create new routes to certification based on student performance, such as three years of data demonstrating student success or effective rating from states that use data on student performance in their annual evaluations.

ACTION: State provides certification reciprocity for online instructors certified by another state.

Metric 39 deals with teacher certification reciprocity.

Teacher Certification Reciprocity

39. State law provides reciprocity for certification of teachers.

With digital learning, it is possible to import and export effective teachers without requiring educators to move from one state to another. States should explore opportunities to recruit the most effective teachers from around the country and even from around the world. Reciprocity agreements with states that have taken bold steps to professionalize the teaching profession provide assurances that teachers are effective.

ACTION: State creates the opportunity for multi-location instruction.

Metric 40 deals with the ability of effective teachers to teach anywhere, anytime.

Teacher of Record

40. State has a mechanism to allow teachers to be "teacher of record" in multiple schools.

States should ensure their data systems have adequate mechanisms to allow teachers to serve students statewide. The best physics or chemistry or world history teacher in the state could teach students in schools statewide.

ACTION: State evaluates the effectiveness of teachers based, in part, on student learning data.

Metric 41 deals with using data as an objective measure of teacher effectiveness.

Teacher Effectiveness

41. Under state law, data on student learning is used to evaluate the effectiveness of teachers.

With digital learning, data on student learning – not just classroom management, personal interactions or even popularity – will be the leading factor in determining whether teachers are effective.



NUTS-AND-BOLTS POLICIES

States must modernize their evaluation process to incorporate data on student learning to ensure equity among all teachers – those in the classroom and those online. Online teachers should not be held to a higher standard than their classroom counterparts in evaluating and rewarding effective teaching.

Digital learning also provides the opportunity to extend the reach and results of effective educators. States should require school district to offer online courses with a certified teacher to students whose classroom teacher is not certified in the subject. States should elevate effective teachers and maximize their exposure to students and other teachers alike.

ACTION: *State ensures that teachers have professional development or training to better utilize technology and before teaching an online or blended learning course.*

Metric 42 deals with professional development for teachers.

Professional Development

42. State law provides opportunities for training and professional development in digital learning, such as requiring teachers to take a professional development course in digital instruction before teaching an online or blended learning course.

Colleges of education and teacher preparation programs should prepare students for teaching in the digital age. Providing professional development online will facilitate access and real-time support for educators.

States should revise their process for approving teacher preparation programs to ensure colleges of education are training teachers to get beyond the front of the classroom. Preparation courses should include both online and blended courses.

ELEMENT 7:

QUALITY CHOICES: ALL STUDENTS HAVE ACCESS TO MULTIPLE HIGH QUALITY DIGITAL LEARNING PROVIDERS.

ACTION: *State has an open, transparent, expeditious approval process for digital learning providers.*

Metrics 43 – 48 deal with the regulatory system that governs entry of digital providers, including digital content, individual online course providers and virtual schools, into education.

Criteria and Consistency

- 43.** State law or practice allows statewide authorizers for digital providers, including virtual charter schools and individual online course providers.
- 44.** State law or practice clearly defines the criteria and/or process for approval of digital providers, including virtual charter schools and individual online course providers.
- 45.** State law or practice allows digital providers, including virtual charter schools and individual online course providers, to appeal decisions or revise and resubmit their applications after a denial.

Timeframes

- 46.** State law or practice allows digital providers, including virtual charter schools and individual online course providers, to apply for approval at any time.
- 47.** State law or practice defines the length of time authorizers must respond to applicants.
- 48.** State approval of digital providers lasts for three or more years.

Creating a regulatory framework for the digital age should reflect the reality that even nationally recognized experts in education can't predict what new and innovative learning technologies will emerge during the next decade. In an area with enormous potential for student achievement coupled with so many unknowns, states must resist the temptation and tendency to overprescribe a process that has the unintended consequence of denying entry to education entrepreneurs that may provide incredibly effective tools for teaching and learning.



NUTS-AND-BOLTS POLICIES

States should consider creating a bifurcated system – one that provides a reasonable threshold for entry into schools with relatively demanding benchmarks for remaining an approved provider. States could also create parameters for a permanent pilot program that allows new technologies to enter the education system under the same rules and demonstrate their effectiveness.

Ultimately, the true test of effectiveness is rising student achievement measured objectively and compared fairly.

ACTION: *State provides students with access to multiple approved providers including public, private and not-for-profit.*

Metric 49 – 51 deal with the type of digital options available students.

Type of Provider:

Public, Charter, Not-for-Profit and For-Profit

49. State has public options for digital learning, including content, individual online courses and virtual and blended brick-and-mortar schools.
50. State offers not-for-profit options for digital learning, including content, individual online courses and virtual and blended brick-and-mortar schools.
51. State offers for-profit options for digital learning, including content, individual online courses and virtual and blended brick-and-mortar schools.

Charter schools are the vanguards of digital learning. These laboratories of innovation are embracing digital learning.

Private sector providers have the capital to invest in creativity, which is the hallmark of new learning technologies that effectively engage and educate students. As new technologies enter the market, quality will go up and price will go down.

States should enlist the assistance of charter schools and private sector partners in a united effort to improve education for all students. States could allow for-profit providers to offer education directly to students, rather than through a not-for-profit organization. States should consider creating public-private partnerships to expand digital learning. When students learn, everyone wins.

ACTION: *States treat all approved education providers - public, chartered and private – equally.*

Metrics 52 - 53 deal with creating a level playing field for not-for-profit and for-profit digital providers.

Equitability

52. State law provides the same amount of funding and the same payment process for virtual schools, whether the school is public, charter, not-for-profit and for-profit.
53. State law provides the same amount of funding and the same payment process for individual online course providers, whether the provider is public, charter, not-for-profit and for-profit to providers.

The overwhelming majority of states allow school districts to negotiate contracts with digital providers, which creates significant disparity in funding to digital providers. Some school districts provide per pupil funding minus a reasonable administrative cost. Some school districts retain surplus funding after successfully negotiating a price per pupil that is significantly lower than per pupil funding provided by the state. Some school districts negotiate prices that are too low to sustain participation from digital providers for the long-term. Some school districts don't have staff with the expertise to negotiate solid contracts that yield a good return on investment.

Spending more money is not the answer. A higher cost doesn't necessarily mean higher quality. Likewise, price controls and decisions driven solely by the lowest cost may hinder quality.

States should explore ways to ensure the best quality digital learning at the best price. To provide transparency to the process, states might require school districts to publicly disclose rates paid to digital providers. States might leverage the efficiencies of scale to negotiate low-cost contracts that are available, but not mandatory, for school districts. States might require school districts to return savings generated from well-negotiated contracts.

ACTION: *State has no administrative requirements that would unnecessarily limit participation of high quality providers (e.g. office location).*



NUTS-AND-BOLTS POLICIES

Metric 54 deals with bureaucratic requirements that threaten multiple options for students.

Bureaucracy

54. State law does not have a residency requirement for virtual charter school board members, does not dictate office location and does not mandate other onerous or non-educational administrative requirements.

States should ensure relics of the pre-digital age don't creep into the criteria or process for approving providers. Any requirement related to geography – from residency limits for charter school board members to requiring in-state offices – should be replaced with an outcome measure that ensures high quality providers can enter the system.

ACTION: *State provides easy-to-understand information about digital learning, including programs, content, courses, tutors, and other digital resources, to students.*

Metric 55 deals with ensuring parents know all of the digital options available for their students.

Public Awareness

55. State has a website that provides information and links to all digital learning opportunities, including all approved virtual schools and individual online course providers.

Parents and students are the consumers of education. States should provide families with ample information to make informed decisions about their digital options.

ELEMENT 8:

ASSESSMENT AND ACCOUNTABILITY: STUDENT LEARNING IS THE METRIC FOR EVALUATING THE QUALITY OF CONTENT, COURSES, SCHOOLS AND INSTRUCTION.

ACTION: *State administers assessments digitally.*

Metric 56 deals with digital assessments.

Assessment Administration

56. State law requires state mandated assessments, including annual assessments, end-of-course exams and high school exit exams, to be administered digitally, either online or on a computer.

Digital assessments can be scored instantaneously, which provides multiple benefits. Tests can be administered later in the year, which extends learning time for students. Students will learn their results quickly – instantly or in as little as a week – which removes the limbo around promotion to the next grade.

More efficient scoring will strengthen accountability. Rewards for success and consequences for failure will be implemented promptly, without the delay and uncertainty associated with

months of waiting for paper-and-pencil tests to be graded and returned. Effective teachers can be rewarded and teachers needing improvement can get the training and professional development required for their success.

States are already working together to achieve this goal. The 44 states that have adopted Common Core State Standards in Math and Language Arts are working collaboratively to develop assessments. Both consortia, the Partnership for Assessment of Readiness for College and Careers (PARCC) and Smarter Balanced Assessment Consortium (SBAC), are developing assessments that can be administered digitally in 2014-2015. States should develop a comprehensive plan to implement digital assessments.

ACTION: *State ensures a digital formative assessment system.*

Metric 57 deals with formative assessments.



NUTS-AND-BOLTS POLICIES

Formative Assessments

57. State supports school districts to offer formative assessments.

Formative assessments provide data which allows teachers to adapt instruction to a student's strengths and weaknesses. Providing formative assessments throughout the year ensures students are appropriately challenged, spending enough time to master the material.

States should support the development of formative tests that are embedded in content, aligned to curriculum and used to guide instruction throughout the year. States could establish an assessment engine that is accessible statewide or create a list of quality assessments that school districts can use. States could use the aggregate buying power of the state to negotiate a lower cost contract for formative assessments that school districts can access, making assessments more cost-effective.

ACTION: *State holds schools and individual online course providers accountable for achievement and growth.*

Metrics 58 – 59 deal with accountability for schools.

Quality of Schools

58. Under state law, data on student learning is used to evaluate the quality of schools.

59. State law requires poor performing schools, determined by student learning data, to be closed.

Without question, virtual schools and individual course providers should be held accountable based on data of student learning, just like all schools.

However, digital learning assumes all students will achieve; students will not advance to the next grade or level of learning without demonstrating competency. In a competency-based system that starts in kindergarten, measuring effectiveness based on annual progress may become obsolete. Under a competency-based system, the leading indicator of quality will be students achieving at or above expectations.

States that adopt statewide plans to transition to blended learning models should ensure their accountability system reflects the new paradigm.

ACTION: *State evaluates the quality of content and courses predominately based on student learning data.*

Metrics 60 – 61 deal with accountability for individual online course providers.

Quality of Individual Courses

60. Under state law, data on student learning is used to evaluate the quality of individual online courses.

61. State law requires poor performing individual course providers, determined by student learning data, to be closed.

Although using data to evaluate the quality of schools is commonplace, the need to evaluate individual online course providers is becoming more of an issue now. States should consider ways to use data on completion and achievement to measure the effectiveness of individual online courses. Until the transition to a competency-based system is completed, states may consider pre-tests at the beginning of the course to determine how well students are prepared, while maintaining the same expectation of achievement for all students.



NUTS-AND-BOLTS POLICIES

ELEMENT 9:

FUNDING: FUNDING CREATES INCENTIVES FOR PERFORMANCE, OPTIONS AND INNOVATION.

ACTION: *State allows for digital content to be acquired through instructional material budgets and does not discourage digital content with print adoption practice.*

Metric 62 deals with providing funding to transition to digital learning.

Funding Flexibility

62. State law permits funding for instructional materials to be used to purchase digital content and systems.

Funding flexibility allows school districts to initiate the transition to digital learning. It also ensures digital learning does not become an additional layer of education but rather a conscious replacement for the current system.

ACTION: *State funding model pays providers in installments that incentivize completion and achievement.*

Metric 63 deals with the shift from an attendance-based funding to achievement-based funding.

Performance-Based Funding

63. Under state law, state provides final installment of funding when a student successfully completes the course.

Most states fund education based primarily on how many students attend a school rather than what they learned while they are there. Digital learning provides the opportunity to shift the focus from attendance to achievement.

ACTION: *State does not limit the number of credits earned online.*

Metric 64 deals, primarily, with the ability of students to personalize the pace of their education.

Limits on Credit

64. Under state law, students may enroll in an unlimited number of individual online courses.

Limiting the ability of students to earn credits through individual online courses inhibits customization. Students should not be prevented from pursuing additional online courses that provide the best opportunity for their success.

States should consider innovative ways to fund education so students can accelerate their learning by taking more courses than what's budgeted for full-time enrollment. States could consider multi-year funding methods. For example, a student entering high school would be eligible for four years of education funding that can be accessed at any time during that span of time. In many states, students who add two courses per year would be eligible for graduation by the end of their junior year. Some students may accelerate coursework in their early years to provide flexibility in their schedule to work or participate in an internship.

ACTION: *State funding allows customization of education including choice of providers.*

Metrics 65 – 66 deal with funding education.

Funding Policy and Accounting Systems

65. State law requires funding to follow the student to the school or course of their choice.

66. State law provides fractional funding to pay providers for individual online courses.

Providing a customized and personalized education requires funding to follow the student to the school or course of their choice. As more students opt for individual online courses, the ability to pay multiple providers by the course for each student's education will become increasingly important.



NUTS-AND-BOLTS POLICIES

ELEMENT 10:

INFRASTRUCTURE: INFRASTRUCTURE SUPPORTS DIGITAL LEARNING.

ACTION: *State is replacing textbooks with digital content, including interactive and adaptive multimedia.*

Metric 67 deals with the transition to digital content.

Digital Content

67. State law requires a majority of content, such as textbooks, to be provided digitally.

Many states are requiring school districts to transition to digital content. Digital content should not be limited to online textbooks but should offer an array of interactive and adaptive learning technologies.

ACTION: *State ensures high-speed broadband Internet access for public school teachers and students.*

Metric 68 deals with providing adequate access to the Internet.

High-Speed Internet Access

68. State law requires all schools to have high-speed broadband Internet access.

Internet service links students to learning. It is integral to advancing digital learning, particularly in blended schools.

States should assess the Internet capability of their schools and develop a plan to provide all schools with high-speed broadband Internet access. States should develop a public-private partnership with Internet providers to provide Internet home service at a reduced rate to students in families with low incomes.

ACTION: *State ensures all public school students and teachers have Internet access devices.*

Metric 69 – 70 deals with providing access devices for teachers and students to access digital content and the Internet.

Internet Access Devices

69. State law requires all teachers to be provided with Internet access devices.

70. State law requires all students to have Internet access devices.

Internet access devices provide the gateway to knowledge and skills. Like Internet service, these devices are essential for digital learning.

States don't necessarily have to purchase a device for every student in the state to achieve this goal. States may start by simply providing the content online and letting students use their own devices for access to determine demand. States may fund devices only for students who meet an income threshold and allow others students to choose and use their own devices. States may create public-private partnerships to provide the infrastructure to support digital learning. States may collaborate with school districts to maximize federal funding.

ACTION: *State ensures local and state data systems and related applications are updated and robust to inform longitudinal management decisions, accountability and instruction.*

Metrics 71 – 72 deal with collecting and using data in the digital age.

Data Quality Campaign

71. State has implemented all of the Data Quality Campaign's 10 Essential Elements of a State Longitudinal Data System.

72. State has implemented all of the Data Quality Campaign's 10 State Actions to Ensure an Effective Data Use.

The Data Quality Campaign is a national, collaborative effort to encourage and support state policymakers to improve the availability and use of high quality education data to improve student achievement. The 10 Essential Elements of Statewide Longitudinal Data Systems define the characteristics of a quality data warehouse. The 10 State Actions to Ensure an Effective Data Use provide a roadmap for how lawmakers and policymakers should use the data.