DIGITAL LEARNING NOW!

December 1, 2010

Foundation for Excellence in Education

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We share a vision for education in America.

Our vision is an education that maximizes every child's potential for learning, prepares every child with the knowledge and skills to succeed in college and careers, and launches every child into the world with the ability to pursue his or her dreams.

By unleashing the power of digital learning, America has the ability to realize that vision today.

Digital learning can customize and personalize education so all students learn in their own style at their own pace, which maximizes their chances for success in school and beyond. With digital learning, every student - from rural communities to inner cities – can access high quality and rigorous courses in every subject, including foreign languages, math and science.

Digital learning can also be the catalyst for transformational change in education. It is a tool that can address a myriad of challenges faced by schools, community leaders, and policymakers. Digital learning can connect students in the most remote areas with high quality college- and career-prep courses taught by a highly qualified teacher who does not work inside their school building. It can be a powerful tool for teachers who are struggling to meet a variety of student needs. And it can connect communities to a vast network of resources that will help their students compete and succeed in the global economy.

As Governors, we learned that a comprehensive roadmap to reform yields success. That's why we convened the Digital Learning Council with leaders in education, government, philanthropy, business, technology and think tanks to define the actions that lawmakers and policymakers must take to spark a revolution in digital learning. More than 100 people from across the nation invested countless hours and energy in this rapid virtual policy development. We are grateful to the council members for forging a path for education's historic shift from print to digital, from age groups to individuals and from seat time to competency.

The 10 Elements of High Quality Digital Learning is just the beginning. During the next year, we will work to turn proposals into policy and arguments into action to transform education for today's students. We hope you join us.

Jeb Bush **Bob Wise**

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Introduction

The Challenge

Preparing more than 50 million students with the knowledge and skills to succeed in college and careers is the greatest moral and economic challenge of our era.

The stakes are high. A high quality education will narrow the achievement gap and subsequent income divide within our country. Producing more graduates with a mastery of math and science will ensure America maintains its lead in the global innovation economy.

The Status Quo

Technology has transformed the way we live, work and play. We can communicate across oceans and continents within seconds. We can bank, shop, and donate securely from the convenience of our homes or offices. We can work remotely, even in planes, without losing productivity and often increasing it. We can entertain ourselves with a plethora of books, videos and games – accessible at a moment's notice through the Internet.

Yet, our school system remains, by and large, the same as it was fifty years ago. The overwhelming majority of students attend a brick and mortar school for a set number of hours on a set number of days based primarily on an agrarian calendar. Students sit at desks and consume content in textbooks that may already be outdated.

The Results

The results of the status quo are dismal.

One-third of fourth graders and one-quarter of eighth graders are functionally illiterate, according to the National Assessment of Educational Progress.[i]

Nearly one-third of students don't earn a high school diploma. Last year, 1.3 million U.S. students failed to graduate from high school. This year, an average of 7,200 students - every day - will drop out of school.[ii]

An estimated $1 billion is spent each year on college remediation – knowledge students were supposed to obtain in high school.[iii]

Among the top 30 industrialized countries, U.S. high school students rank 21st in science and 25th in math.[iv]

The Catalyst for Transforming Education

Digital learning can transform education.

Technology has the power and scalability to customize education so each and every student learns in his or her own style at his or her own pace, which maximizes the chances

for success in school. It offers teachers an effective way to overcome challenges and better educate students of all learning needs.

Digital learning is the great equalizer. It holds the promise of extending access to rigorous high quality instruction to every student across America, regardless of language, zip code, income levels, or special needs. New tools and improved services will help schools diagnosis and address special learning needs more effectively and efficiently.

Digital learning is a proven method. For more than a decade, corporations[v], the military and higher education[vi] have used multiple modes of instruction to create a rapid and efficient path to mastery. In some countries, digital learning is already an integral part of the education system. In the United States, an increasing number of K-12 school models are utilizing the best of online and blended learning. The fact is digital interaction and learning through social media, the Internet, and mobile devices are a way of life for most teens everywhere except in education.

With digital learning, students will learn more, teachers will be provided new tools and skills, and schools will be more productive.

Turning Obstacles into Opportunities

Growing budget deficits and shrinking tax revenue present a tremendous challenge for the nation's Governors and lawmakers, especially when education sometimes consumes up to half of a state's budget. However, what might appear to be an obstacle to reform can also present a great opportunity for innovation.

Building a high quality education system is an investment in the future economy. Producing a knowledgeable and skilled workforce will give states a competitive edge in the global race for capital and the high-wage jobs that investment creates. It is a long-term strategy with huge returns, which often materialize after the Governors and lawmakers who championed reform have left political office.

However, spending more money without changing the system or adding a layer of digital learning over the current system is not the answer. Instead, education needs to transition into the digital age, which means adopting a new way of operating.

For example, blended learning incorporates an intentional shift of instruction to an online or technology-based environment. Students spend a portion of the day learning on a computer and a portion in a more traditional classroom setting. This innovative approach effectively incorporates engaging lessons, adaptive curriculum, virtual environments, and learning games on Web 2.0 platforms, which boost learning. At the same time, this model allows differentiated and distributed staffing (i.e. different levels and locations), which saves money and extends the reach of effective teachers by allowing them to teach more students in smaller, more personalized settings.

Meeting the Challenge

Jeb Bush, Governor of Florida 1998 – 2007, and Bob Wise, Governor of West Virginia 2001 – 2005, launched the Digital Learning Council to identify policies that will integrate current and future technological innovations into public education. The Digital Learning Council united a diverse group of more than 100 leaders from education, government, philanthropy, business, technology, and think tanks to develop the roadmap of reform for state lawmakers and policymakers.

The Digital Learning Council was commissioned with a set of guiding principles:

- Aspirational: The elements are bold. When achieved, the elements will transform education for the digital age.
- Comprehensive: The elements encompass technology-enhanced learning in traditional schools, online and virtual learning, and blended learning models that combine online and onsite learning.
- State-focused: The elements are directed toward state laws and policies with the recognition that federal and local governments also play a role in providing a high quality education.
- Measurable: The elements can be measured.
- Long-term: The elements create a roadmap for states to achieve a high performing education system for the long-term. States should be measured based on their progress toward achieving the elements.

The Digital Learning Council defined the elements and identified the actions that need to be taken by lawmakers and policymakers to foster a high quality, customized education for all students. This includes technology-enhanced learning in traditional schools, online and virtual learning, and blended learning that combines online and onsite learning. The elements, policies, and recommendations were based on input and feedback from members expressed during individual interviews, more than 40 web conferences and via email.

10 Elements of High Quality Digital Learning

1. **Student Eligibility:** All students are digital learners.
2. **Student Access:** All students have access to high quality digital content and online courses.
3. **Personalized Learning:** All students can customize their education using digital content through an approved provider.
4. **Advancement:** Students progress based on demonstrated competency.
5. **Content:** Digital content, instructional materials, and online and blended learning courses are high quality.
6. **Instruction:** Digital instruction and teachers are high quality.
7. **Providers:** All students have access to multiple high quality providers.
8. **Assessment and Accountability:** Student learning is the metric for evaluating the quality of content and instruction.
9. **Funding:** Funding creates incentives for performance, options and innovation.
10. **Delivery:** Infrastructure supports digital learning.

10 Elements of High Quality Digital Learning

1. ***Student Eligibility: All students are digital learners.***

   Actions for lawmakers and policymakers:
   - State ensures access to high quality digital content and online courses to all students.
   - State ensures access to high quality digital content and online courses to students in K-12 at any time in their academic career.

All students have a right to a high quality education. In the 21st century, a high quality education must include digital learning.

Students who are eligible for public school should be eligible for publicly funded digital learning. Establishing criteria for eligibility, such as previous attendance in a public school, only limits, delays and diminishes opportunities for learning.

Small increases in public school enrollment may be offset by lower cost virtual courses and savings gained by early graduation.

2. ***Student Access: All students have access to high quality digital content and online courses.***

   Actions for lawmakers and policymakers:
   - State does not restrict access to high quality digital content and online courses with policies such as class size ratios and caps on enrollment or budget.
   - State does not restrict access to high quality digital content and online courses based on geography, such as school district, county, or state.
   - State requires students take high quality online college-or career-prep courses to earn a high school diploma.

Digital learning opens the virtual door to a high quality education. Where technology has created unprecedented access to a high quality education, policies that limit or control access threaten to build virtual barriers where the walls have already come down. Moreover, restricting access based on geography, such as where a student lives, is illogical in the digital world where learning can occur anywhere and everywhere.

Capacity – not arbitrary caps on enrollment or budget – should be the only factor in limiting access to digital learning. A number in state statute should not deny a student access to digital learning where space is available.

With digital learning, teachers can provide one-on-one instruction and mentoring to many students across the nation. Artificially limiting class size, prescribing teacher-student ratios

or restricting a teacher's ability to serve students at multiple schools ignores the freedom and flexibility that comes with digital learning.

Requiring students to take a high quality college prep online course ensures students are better prepared to succeed in life after graduation in the digital age. A robust offering of digital content and online courses expands options and ensures students acquire knowledge and gain skills from the experience of digital learning.

3. ***Personalized Learning: All students can customize their education using digital content through an approved provider.***

   Actions for lawmakers and policymakers:
   - State allows students to take online classes full-time, part-time or by individual course.
   - State allows students to enroll with multiple providers and blend online courses with onsite learning.
   - State allows rolling enrollment year round.
   - State does not limit the number credits earned online.
   - State does not limit provider options for delivering instruction.

Digital learning allows an individualized educational experience.

In today's world, learning doesn't have to start when a student enters the classroom and end when the school bell rings. Students can access digital learning virtually whenever and wherever they are – both physically and figuratively.

Access to a comprehensive catalog of online courses means a student in rural Indiana or inner city Detroit can learn Mandarin Chinese, forensic science or college-level calculus – regardless of whether their school offers these courses in a classroom.

With personalized learning, students can spend as little or as much time as they need to master the material. Self-paced programs mean high achieving students won't get bored and can accelerate academically, while struggling students can get additional time and tutoring to gain competency and the confidence that comes with it.

Digital learning can extend the school day or school year and connect students with community resources with little or no additional cost. Flexible scheduling allows students to take full advantage of their peak learning times to complete lessons. To mitigate the cost of extending the school year, states could provide digital content 365 days a year but limit instructional support to shorter timeframes.

Best of all, students can experience blended learning. Students can learn in an online or computer-based environment part of the day and in traditional classroom, even one-on-one tutoring, for part of the day – essentially the best of both worlds combined into one education.

4. ***Advancement: Students progress based on demonstrated competency.***

   Actions for lawmakers and policymakers:
   - State requires matriculation based on demonstrated competency.
   - State does not have a seat-time requirement for matriculation.
   - State provides assessments when students are ready to complete the course or unit.

Grade level promotion has historically been dictated by birthdays, attendance and minimum achievement. Instructional pacing, aimed at the middle of the class, may be too fast or too slow for some students who become frustrated, disengaged and unmotivated.

Digital learning offers the potential for students to study at their own pace and advance based upon competency and mastery of the material — it is student-centered, not school-centered. In this environment, seat time requirements and the all-too-common practice of social promotion become obsolete. A student will spend as much time as necessary to gain competency. Additionally, digital learning adapts to situations where a student is ahead in one subject and behind in another.

Making high stakes assessments, which are used to trigger progression, available when students are ready will accelerate student learning.

5. ***Content: Digital content, instructional materials, and online and blended learning courses are high quality.***

   Actions for lawmakers and policymakers:
   - State requires digital content and online and blended learning courses to be aligned with state standards or common core standards where applicable.

The dynamic nature of digital content and its varied uses requires a fresh and innovative approach to ensuring high quality content. Like print content, digital content should be aligned to state academic standards or common core standards for what students are expected to learn. However, digital content should not be held to higher standard than print content. Freedom for interactive engagement that results in higher student retention and achievement should be encouraged.

States should abandon the lengthy textbook adoption process and embrace the flexibility offered by digital content. Digital content can be updated in real time without a costly reprint. The ongoing shift from online textbooks to engaging and personalized content, including learning games, simulations, and virtual environments, makes the traditional review process even less relevant.

Transitioning to digital content will improve the quality of content, while likely saving money in production that can be dedicated to providing the infrastructure for digital learning.

6. ***Instruction: Digital instruction and teachers are high quality.***

Actions for lawmakers and policymakers:

- State provides alternative certification routes, including online instruction and performance-based certification.
- State provides certification reciprocity for online instructors certified by another state.
- State creates the opportunity for multi-location instruction.
- State encourages post-secondary institutions with teacher preparation programs to offer targeted digital instruction training.
- State ensures that teachers have professional development or training to better utilize technology and before teaching an online or blended learning course.

Great teachers produce great students – wherever they live or learn. Digital learning erases physical barriers that have prevented the widespread connection between effective teachers and eager students. Statutory and administrative practices that stop instruction – at the classroom door, school campus, state border or even the nation's border – limit access to quality educators.

A retired NASA scientist in Cape Canaveral who is qualified to teach physics in the Sunshine State should be able to teach students in any state in the country. A digital educator in one school should be able to teach students in multiple schools in-state or out-of-state.

Preparation and professional development programs should educate teachers and administrators on how to engage students, personalize learning, teach online and manage learning environments. Educators should be prepared for specific roles – traditional, blended or online – and then certified based on demonstrated performance. Performance-based certification will become increasingly important as the number and type of roles for learning professionals expands.

Breaking down the barriers to digital instruction can improve the quality of education, while at the same time reduce costs. Teachers can serve students across the state or nation from one location. Digital learning lends itself to innovative staffing plans and formation of an opportunity culture that is appealing enough to attract and retain top teaching talent, and to maximize impact and minimize cost.

7. Providers: All students have access to multiple high quality providers.

Actions for lawmakers and policymakers:

- State has an open, transparent, expeditious approval process for digital learning providers.
- State provides students with access to multiple approved providers including public, private and nonprofit.
- State treats all approved education providers- public, chartered, not-for-profit, and private – equally.
- State provides all students with access to all approved providers.
- State has no administrative requirements that would unnecessarily limit

participation of high quality providers (e.g. office location).
- State provides easy-to-understand information about digital learning, including programs, content, courses, tutors, and other digital resources, to students.

In the digital age, innovative learning programs are rapidly evolving and providers can be located anywhere. Regulations should reflect this new paradigm.

To maximize the potential of digital learning, states must provide a rich offering of providers that can cater to the diverse and distinctly unique needs of different students. States should set common-sense standards for entry, have a strong system of oversight and quality control, and foster a robust competitive environment where students can choose the provider who best meets their learning needs. Unnecessary administrative requirements, such as having a brick and mortar office in the district or state, create obstacles that prevent high quality providers from participating.

Public, not-for-profit and private for-profit organizations provide different benefits to the education consumers – both the students and the taxpayers. Public providers were pioneers in digital learning and provide a record of proven success in providing supplemental education in partnership with school districts. Not-for-profits extend access and often make contributions to open education resources. Private providers have the capital to invest in development of high quality content, can administer comprehensive school management services and offer collaboration opportunities with their national network of students.

Consumers of education – both students and parents –often provide the best feedback on the quality of providers. A publicly available database that fosters a feedback loop, similar to tools used by Amazon or eBay, would help parents and students make informed decisions about digital learning.

8. Assessment and Accountability: Student learning is the metric for evaluating the quality of content and instruction.

Actions for lawmakers and policymakers:
- State administers assessments digitally.
- State ensures a digital formative assessment system.
- State evaluates the quality of content and courses predominately based on student learning data.
- State evaluates the effectiveness of teachers based, in part, on student learning data.
- State holds schools and providers accountable for achievement and growth.

Administering tests digitally has multiple benefits. Tests can be administered and scored quickly and efficiently. Computerized scoring provides the opportunity for a cost effective method to create better tests beyond multiple choice, including simulations and constructed responses. Getting the result of tests faster can improve instruction as well as expedite rewards and consequences, which can strengthen accountability for learning.

Learning management systems, digital curriculum, and online summative and formative assessments have the distinctive capability of collecting real-time data on the progress of each student against learning objectives. Instant feedback for students and personalized analytics for teachers provide the support for continuous improvement and competency-based progress.

Outcomes matter. States should hold schools and online providers accountable using student learning to evaluate the quality of content or instruction. Providers and programs that are poor performing should have their contracts terminated.

History has proven that inputs, such as teacher certification, programmatic budgets and textbook reviews, do not guarantee a quality education. In fact, these regulatory processes often stifle innovation and diminish quality. Policymakers should resist attempts to create a checklist of inputs and, instead, focus on developing an accountability framework that is based on outcomes.

While conversion to digital assessments requires an initial investment, transitioning to a digital system can save money in the long run.

9. Funding: Funding creates incentives for performance, options and innovation.

Actions for lawmakers and policymakers:

- State funding model pays providers in installments that incentivize completion and achievement.
- State allows for digital content to be acquired through instructional material budgets and does not discourage digital content with print adoption practices.
- State funding allows customization of education including choice of providers.

How money is spent is as important as *how much* money is spent on education. Funding should fuel achievement and innovation, not reward complacency and bureaucracy.

Paying for success will yield success. Right now, the majority of education funding rewards attendance. Schools get paid when students show up, regardless of what or how much students learn or achieve. Under that framework, its no wonder achievement is stagnant. Moreover, digital learning can actually save money in the long run. Full-time virtual schools can save money on facilities or transportation compared to traditional schools. Supplemental programs offering individual course enrollments can offer even bigger savings to states and districts. As digital learning grows, economies of scale will drive costs down. Partners within states or across state lines can further increase the purchasing power.

Given fiscal challenges faced by governments across the country, states need to be innovative to meet the challenge of providing access to digital content. To build a quality digital learning environment, states will have to spend smarter – not necessarily more. Geographically unbounded digital learning provides incentive for states to develop an equalized and weighted funding formula that better matches resources with individual

student needs regardless of zip code.

10. Delivery: Infrastructure supports digital learning.

Actions for lawmakers and policymakers:

- State is replacing textbooks with digital content, including interactive and adaptive multimedia.
- State ensures high-speed broadband Internet access for public school teachers and students.
- State ensures all public school students and teachers have Internet access devices.
- State uses purchasing power to negotiate lower cost licenses and contracts for digital content and online courses.
- State ensures local and state data systems and related applications are updated and robust to inform longitudinal management decisions, accountability and instruction.

The proliferation of mobile phones and access devices suggests the potential of mobile learning. Students are already using mobile devices to communicate, access and share information, conduct research, and analyze data. These devices are the gateway to digital learning.

Digital learning will also support educators in better identifying and meeting student needs by providing them real-time data on student performance, expanded access to resources to individualize instruction, and online learning communities to gain professional development support.

States can adopt a variety of approaches to accelerate the shift to digital content, online assessment, and high access environments including learning environments that take advantage of student owned devices. While local choice and options should be empowered, states can use purchasing power to negotiate lower cost licenses and contracts for everything from digital content to access devices to mobile Internet services. Equipment and services can be provided based on financial need. Public-private partnerships can also become a tool to build and sustain the infrastructure for digital learning.

Next Steps & Implementation Issues

Advocacy. With the release of this report, the co-chairs launch Digital Learning Now, a national initiative to advance policies that accelerate the shift to digital learning.

Progress Report. A Report Card on Digital Learning, detailing state-by-state progress, will be released in October 2011.

Support. The Foundation for Excellence in Education, the Alliance for Excellent Education, The International Association of K-12 Online Learning (iNACOL), Innosight Institute, State Educational Technology Directors Association (SETDA), Software and Information Industry Association (SIIA), and Vander Ark/Ratcliff are prepared to offer strategic and technical assistance to state leaders.

Things State Leaders Can Do.

1. Review resource materials starting with Keeping Pace 2010
2. Update surveys of student access to technology.
3. Hold a digital learning summit (like the one held recently in Virginia)
4. Hold a blended learning conference with districts that have schools in transformation
5. Issue an RFP for statewide online learning services
6. Revise statewide technology plans to advance digital learning in your state. Then measure and report on your progress annually.
7. Build a three-year budget that outlines estimated costs and savings from the shift to digital learning.
8. Sponsor or support legislation to adopt the 10 Elements of High Quality Digital Learning.
9. Adopt or support administrative rules that adopt the 10 Elements of High Quality Digital Learning.
10. Explore regional collaboration and reciprocity opportunities.

Resources

Keeping Pace 2010. This annual report is the best source of information about online and blended learning.

The Online Learning Imperative: A Solution to Three Looming Crises in Education. This report from the Alliance for Excellent Education points to digital learning as a solution for three significant challenges: (1) increased global demands for skilled workers, (2) significant financial shortfalls, and (3) a looming teacher shortage. Embracing online-learning opportunities for students and teachers will strengthen the supply and quality of teachers, improve efficiency, and increase students' college and career readiness.

Project RED. Studies indicate that properly implemented technology can provide immediate savings at all levels. The report cites 13 different factors in which online and digital learning can decrease costs for states including econometric estimates of savings from improved outcomes (some quite tangible and direct, some speculative and long term).

Innovate to Educate: System [Re]Design for Personalized Learning. This report by the Software & Information Industry Association (SIIA) – in collaboration with ASCD and the Council of Chief State School Officers (CCSSO) – provides a primer on the reengineering of our industrial-age, assembly-line educational model – based on fixed time, place, curriculum and pace. It includes practice and policy recommendations, as well as identifies the critical role of technology and digital learning.

Organizations

Alliance for Excellence in Education
Anywhere Anytime Learning Foundation
Consortium for School Networking (COSN)
Foundation for Excellence in Education
Innosight Institute
International Association of K-12 Online Learning (iNACOL)
International Society for Technology in Education (ISTE)
Internet Keep Safe Coalition
State Educational Technology Directors Association (SETDA)
Software and Information Industry Association (SIIA)

Glossary of Terms

Adaptive content – digital instructional materials that adjust difficulty based on user responses.

Asynchronous - communication that is separated by time such as email or online discussion forums; it may be accessed from multiple settings (in school and/or out of school buildings).

Blended learning - combines online learning with other modes of instructional delivery including onsite instruction; it involves a shift in delivery to an online or computer-based environment for at least a portion of the day with the goal of improving learning, staffing, and/or facilities productivity.

Digital learning – any type of learning that is facilitated by technology.

Full-time online schools - also called cyber or virtual schools, work with students who are enrolled primarily (often only) in the online school. Online schools typically are responsible for their students' scores on state assessments. In some states most full-time online schools are charter schools.

Hybrid Learning - often used synonymously with blended learning; typically refers to blending multiple modes of learning – combining online and on-site pedagogies and materials within the same classroom.

Learning Management System (LMS) - includes content management, communication tools, instructional tools, gradebook and assessment features.

Online learning - instruction via a web-based educational delivery system that includes software to provide a structured learning environment. It can be a teacher-led education that takes place over the Internet, with the teacher and student separated geographically (also cyber learning, e-learning, distance learning).

Open education resources (OER) – freely available instructional materials that can be redistributed.

Social learning – like Facebook for schools, social learning platforms provide a messaging and content sharing among groups. Leading platforms manage privacy issues.

State-led online initiatives - are different from state virtual schools in that these initiatives typically offer online tools and resources for schools across the state but do not have a centralized student enrollment or registration system for students in online courses.

State virtual schools - are created by legislation or by a state-level agency, and/or administered by a state education agency, and/or funded by a state appropriation or grant for the purpose of providing online learning opportunities across the state.

Supplemental online programs - provide a small number of courses to students who are enrolled in a school separate from the online program.

Synchronous - communication in which participants interact in real time such as videoconferencing.

Virtual Classroom – place for instructors and students to interact and collaborate in real time (synchronously). Using webcams, chat boxes and class discussion features, it resembles the traditional classroom, except all participants are accessing it remotely over the Internet.

(adapted from Keeping Pace 2010)

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