

# Center for Digital Education Digital Content Strategy Guide, or All The Information You Want To Know To Develop A Good Plan

## INTRODUCTION

The guidebook you are ‘holding in your hands’ has been developed to assist you in creating a plan for your school or district to bring digital content/ curriculum to your faculty and students, a plan that will govern the acquisition and use of digital content in your system.

It provides you with guidance for developing a plan/ framework that ensures programming that is good for the overall educational enterprise. Such programming is sustainable and effective in systematically achieving the instructional goals and outcomes your system desires, outcomes that can, and undoubtedly should, be aligned with national, state and local standards.

The guide suggests ways in which to maximize your investment in digital content by helping you to assess what you are doing now, what is working and what to leverage to the next stage. It suggests productive collaborations with industry, community leaders and parents to produce the content you need and want. In short, it can guide you toward better and more productive practice.

BOX...quotation from Digital Learning Now (<http://www.digitallearningnow.com>) report of same name, released December 1, 2010..

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.

## DEFINING DIGITAL CONTENT

The consensus among both current instructional and technology leaders in schools and those who have left to become business people in the technology arena, the people we are calling our experts, is that all content that is electronic in nature that supports/ acts as the curriculum and/ or helps students learn can be defined as digital content. It may include delivering traditional content used in the classroom through a technology-based mechanism. But it also is much more than that.

## Center for Digital Education Digital Content Strategy Guide, or All The Information You Want To Know To Develop A Good Plan

Digital content includes

- video: films, tv programs, YouTube segments, vodcasts
- audio: music, lectures, podcasts
- instructional games and simulations: WolfQuest (<http://www.wolfquest.org>) and River City (<http://www.gse.harvard.edu/academics/masters/tie/faculty/dede.html>)
- web 2.0 tools: collaboration, research, quiz tools (<http://school.discoveryeducation.com/schrockguide/edtools.html>)
- textbooks and work books: the major companies now provide digital versions, even the more specialized publishers provide these resources digitally or online
- reference books: Encyclopedia Britannica (<http://www.britannica.com/>); wikipedia ([http://en.wikipedia.org/wiki/Main\\_Page](http://en.wikipedia.org/wiki/Main_Page))

Digital content can be as simple as an article scanned into one teacher's computer to be shared with one class and as complex as the entire curriculum or the library's contents on a local server or in the cloud.

Digital content can be used in online courses, virtual schools, hospital schools, home schooling and in private and public schools including charter schools. As the technology continues to evolve, what can be accessed as a teaching/learning tool, learning object, learning experience or environment will change, extending everyone's 'reach and grasp.'

(INSERT—graphic to be determined)

A reminder of how far we have come...Early 1960s

A student doing homework in her room after dinner and encountering a challenge that requires research had recourse only to an encyclopedia (if her family owned one), a textbook if she had it with her, a call to a knowledgeable friend or relative, or waiting until the next day to use the library at school or the local public library after school.

Center for Digital Education Digital Content Strategy Guide, or All The Information You Want To Know To Develop A Good Plan

THE ADVANTAGES OF USING DIGITAL CONTENT FOR TEACHING AND LEARNING

Digital content provides many benefits:

1. Makes learning Universal Design for Learning (UDL) access easy:

Text size and color can be altered; text can go to voice and vice versa. (see offsets below)

2. Allows greater efficiency and timeliness in updating information:

Textbooks and other trade books often take more than a year to be updated, usually more to be created.

3. Saves youngsters' backs through eliminating the need for heavy backpacks:

No more heavy book bags carried from school to playground to home

4. Enables anywhere anytime learning:

Students can access their materials at anytime...late night learners can be as easily satisfied as early morning ones

---

OFFSET 1.

Even today, in many schools one can hear the COW (Computers On Wheels) making its way down the corridor. Computers on wheels are still the only way some students have access to technology during school time. They take turns, are not necessarily able to keep their work in the computer and find they may not have a computer when they need one.

OFFSET 2

Many people teaching today can remember when textbooks started to migrate to technology and included a CD as an accompaniment.

Center for Digital Education Digital Content Strategy Guide, or All The Information You Want To Know To Develop A Good Plan

5. Facilitates personalized, tailored learning experiences, enabling all students to use appropriate materials for learning:

With the availability of data banks containing detailed student information, both teacher and student can build learning opportunities based on need, readiness, proclivity and availability.

6. Engages students actively and maintains their interest in learning:

Today's young people go nowhere without their smart or not so smart handhelds. They are a visual and tactile generation and education that does not take that into account is almost certainly counterproductive. And if you provide the learning approach and content that match a student, he or she will be much more eager and dedicated to learning.

7. Makes possible immediate feedback

With technology based assessment, students and teachers can recalibrate teaching and learning appropriately and "just in time". This formative assessment can prevent the need to unlearn. Summative evaluation is also easily accessible—to see how well a subject was learned and make further teaching decisions based on that.

8. Makes student research more authentic

Students can use original source materials. The accompanying responsibility is to teach them to evaluate the reliability of various online sources. Alan November warns us about several dimensions. See "Teaching Zack to Think" at

<http://www.novemberlearning.com/wp-content/uploads/2009/03/teaching-zack-to-think.pdf>

---

## SIDEBAR

"In history, original documents available to historians as digital resources from the Smithsonian and other institutions are available to engage learners in historical thinking and reasoning (National Education Technology Plan 2010 [www.ed.gov/technology/netp-](http://www.ed.gov/technology/netp-)

[2010](#) .p 30 )

---

9. Allows teachers to create their own instructional resource repositories

Teachers can produce, recombine and/or repurpose content to create their own instructional resources and libraries. They can easily prepare differentiated versions for different classes and students.

10. Allows students to use materials that match their preferred learning modalities

Students can use materials that are targeted to their learning styles in a personalized, productive manner. Students can produce materials for their own and others' use.

11. Can be a wise use of instructional material funding

Because many digital assets are free, scarce finances can be targeted to specific need areas. In addition many companies, such as Microsoft, will offer discounts for schools and if a school is in a disadvantaged area, even deeper discounts.

12. Enables better management of the inventory of resources:

Everyone with permission can access the "storeroom" to see what is available and what is needed as well as who is using what. Managers can easily determine gaps and fill them. Everyone can easily know what the system "owns" in order to decide whether to use some of the material.

13. Makes community use of school intellectual resources possible

In the same way that students can log on outside of school, so can community members use those resources with the proper planning and agreement with the schools.

14. Can break the bonds of the classroom

With virtual tours, resources and people not available in school digital content can expand learning beyond the classroom walls. This vastly increase what can be considered learning

Center for Digital Education Digital Content Strategy Guide, or All The Information You Want To Know To Develop A Good Plan

resources.

-----How far we have come-----

Some of these capacities have been available for a long time. A teacher in a junior high school put together her own source book of “protest literature” for a course she was teaching to seventh, eight and ninth graders. She made copies of poems, short stories and newspaper articles for the students, bound the documents and handed each student a folder. She created her own “text” but without the ease of today’s digital access.

-----  
**UDL OFFSET** the entire item below is a quotation from the national tech plan

The UDL principles are:

- Provide multiple and flexible methods of presentation of information and knowledge.

Examples include digital books, specialized software and websites, text-to-speech applications, and screen readers.

- Provide multiple and flexible means of expression with alternatives for students to demonstrate what they have learned. Examples include online concept mapping and speech-to-text programs.
- Provide multiple and flexible means of engagement to tap in to diverse learners’ interests, challenge them appropriately, and motivate them to learn. Examples include choices among different scenarios or content for learning the same competency and opportunities for increased collaboration or scaffolding.

The definition of UDL that appears in the Higher Education Opportunity Act of 2008 (103 U.S.C. § 42) has come to dominate the field because of its broad applicability and its research foundation in the learning sciences, both cognitive and neurosciences. p 19

**National Education Technology Plan 2010** [www.ed.gov/technology/netp-2010](http://www.ed.gov/technology/netp-2010)

## ENGAGING IN THE PLANNING PROCESS TO MIGRATE TO DIGITAL CONTENT

As with any other strategic planning process you undertake in your schools<sup>1</sup>, you will need to establish goals, objectives, strategies, (perhaps even) tactics and measurable outcomes for the use of digital content. You will want to analyze the strengths, the weaknesses, the opportunities and the threats (SWOT) of your system.

SWOT: What are we doing with digital content right now?

Do we know of anything we should be doing but aren't?

What will developing a digital content plan mean for us?

What will we lose and what are the potential political cost and the financial burden?

You start with the instructional objectives:

- What should students know and be able to do
  - what the state and national standards say they need to know and do
  - are there cultural norms to be observed

You then move to content and instructional decisions.

- What content and skills must be taught for students to meet the standards and the high stakes testing requirements?
- How much of what is taught will be mandated by instructional leaders and how much

---

<sup>1</sup> If you have never looked at the Balanced Scorecard for systemic planning, you might enjoy considering whether it might be helpful to visit <http://www.balancedscorecard.org/> and also a version designed for schools by CELT <http://www.celtcorp.com/LeadershipOrganizationalDevelopment.aspx>.

Center for Digital Education Digital Content Strategy Guide, or All The Information You Want To Know To Develop A Good Plan

will be left to individual teachers' discretion?

- What learning experiences must they have?
- What learning environments are best for them to succeed in?
- What careers are they considering and how prepared are they becoming?
- What is each student's preferred learning style? How to deal to the strengths while compensating for the weaknesses?
- How can you ensure that it is about the "whole child"<sup>2</sup> and not about the very attractive latest "cool" tool or trend?

BOX to side: Everyone we interviewed made the same statement: It is about the right tool for the job. Choose your device with that in mind. Don't choose the device and then try to figure out how to use it.

- What attitudes and predispositions should students develop?

Finally you move to strategy:

- What steps should be taken to enable students to achieve those objectives?
- What resources are needed to enable students to achieve those objectives?

You include in infrastructure decisions as part of the resources:

*Bandwidth:* access to the Internet and adequate wireless connectivity both inside and outside school should be sufficient so it access is not an obstacle.

*Clear entry point:* the welcome "page" should be uncluttered and intuitive

---

<sup>2</sup> ASCD's position can be found at [www.ascd.org](http://www.ascd.org)

Center for Digital Education Digital Content Strategy Guide, or All The Information You Want To Know To Develop A Good Plan

Easy navigation and manipulation: directions, menus, icons, etc. all should be easy to understand and use

*Security:* this is a complex but essential issue in protecting confidential information about students and faculty, about communications, in fact about the integrity of the entire electronic system,

*Robust managed wireless infrastructure:* central control and sufficient capacity for all students and educators who want/need to be online at the same time

*Standardized laptop configuration:* all the computers accessing the network meet the same requirements for capacity and applications.

For most educational leaders, infrastructure decision require expert knowledge which can come from internal and/or collaborative IT specialists, business partners or potential vendors. A clearly written advisory entitled Assessing technology readiness to support digital learning initiatives can be obtained from Dell.

<http://i.dell.com/sites/content/business/solutions/power/en/Documents/ps1q11cl-20110197-anthony.pdf>

----- Box

From the National Technology Plan

4.2 Recommendation: Ensure that every student and educator has at least one Internet access device and software and resources for research, communication, multimedia content creation, and collaboration for use in and out of school

4.3 Leverage open educational resources to promote innovative and creative opportunities for all learners and accelerate the development and adoption of new open technology-based learning tools and courses. p XIII

-----  
THE CHALLENGES TO OVERCOME

The people we interviewed for this guide (see page...) identified the following issues as

Isa Kaftal Zimmerman

Page 9 of 31

April 8, 2011

## Center for Digital Education Digital Content Strategy Guide, or All The Information You Want To Know To Develop A Good Plan

challenges:

### THINKING SYSTEMICALLY

a. This is a systemic matter, not a quandary for one teacher and one classroom at a time, probably not even a school at a time. The entire system needs to be considered and involved in the movement to digital content for the results to be significant. The size of the system is, of course, a key element. A large city district may have to phase in a plan while a small suburban district can institute the plan in one stage. Nonetheless, the infrastructure decisions need to be made for the largest component from the beginning.

One respondent suggested we should be looking at this as a nation. Why does each educational institution or authority have to “reinvent the wheel?”

### FUNDING

b. Money is not everything but it must be factored in. Currently “money supports paper content” according to our experts, although that is starting to change, they say. Some states have statutes that do not allow multi year subscriptions. The cost conundrum is how to determine the return on investment of creating digital content. It depends on the cost models that providers will have. It involves figuring out how to ensure that the schools are getting the best product and service for what they spend. The schools need to keep track of utilization metrics. In some states, such as North Carolina, choosing content will depend on what the state chooses. There are the state standards and now the Common Core.

Will there be savings with digital content? All of this remains to be seen. Fortunately, private industry is talking with education about these issues and how to make the transition to digital content work and the actual implementation beneficial and reasonably priced.

### NEED FOR RENEWAL

c. And there is a need to refresh regularly to keep the technology current. Because the use of digital content is dependent on the availability of technology it is not a one-time investment. A schedule for doing replacement and upgrading needs to be part of the total plan.

Center for Digital Education Digital Content Strategy Guide, or All The Information You Want To Know To Develop A Good Plan

## EDUCATOR PREPARATION

d. Teachers need to be prepared to integrate digital content into their curriculum and their instructional practice. In many cases they are not provided with such “training” in their preparatory programs. With other teachers there is a need for leadership in the school to encourage them to be innovative. In many schools a culture change is required to enable collaboration and knowledge production (not just consumption) by students and teachers.

“Current supports,” again according to our experts, “do not aid digital work.” Some teachers do not want to use technology; some teachers cannot wait to do but sometimes do not have access. Professional learning for each group needs to be different and tailored.

## OPEN PLATFORM

e. Most school networks cannot deliver rich media objects. School districts need an open platform to load and inventory content and protect users. An open platform allows “using the software to function in other ways than the original programmer intended, without requiring modification of the source code”. ([http://en.wikipedia.org/wiki/Open\\_platform](http://en.wikipedia.org/wiki/Open_platform))

## ACCESS

f. How can teachers and students get to the digital content? The best solution is one device for one student which must be Child Internet Protection Act (CIPA) compliant. (<http://www.fcc.gov/cgb/consumerfacts/cipa.html>)

## STUDENT RIGHTS

g. And you cannot neglect FERPA (Family Educational Rights and Privacy Act) as you determine what content and student information will be available and to whom. (<http://www2.ed.gov/policy/gen/guid/fpco/ferpa/index.html>)

## STATUS OF THE MARKETPLACE

h. Finally, for the moment, the digital content market place is fractured. The major publishers do not yet have a comprehensive strategy to develop and distribute digital content in a coherent manner. Many smaller content companies, nonprofit organizations and teachers are also creating content so it is difficult for school districts to make sense of where all the content is and how to use and align it to the curriculum.

---

**MAJOR SIDEBAR NEAR HERE: HALF A PAGE AS A COLUMN?**

## Center for Digital Education Digital Content Strategy Guide, or All The Information You Want To Know To Develop A Good Plan

Whether you are starting the planning or have already begun, here are some questions you should ask yourself and your team. The answers you arrive at will tell you how much work needs to be done before you complete the plan.

### ESSENTIAL QUESTIONS

1. What are our vision and goals for transforming the learning environment?
2. Is our digital content strategy / plan designed to improve student learning?
3. Is our digital content strategy / plan designed to increase engagement and interaction in learning?
4. Does it allow for “repurposing and manipulation” of materials by both teachers and students for better teaching and learning?
5. Do we have the technical, instructional and leadership expertise to handle this transformation?
6. Do we have the access / capacity to provide this transformation?
7. What should be the timelines and the rollout procedures?
8. What are the check -in points to ensure we are aligning with vision and moving with the timeline?
- A graphic timeline (this could actually be a graphic element running though the document) with the headers from the document in the timeline???**
9. How will we assess student learning in this new medium?
10. How tightly coupled are IT and Curriculum / Instructional staff?
11. Is there organizational capacity to provide professional learning and the ability to create outcome based learning?
12. Will the interface encourage students and teachers to take part in information sharing,

Center for Digital Education Digital Content Strategy Guide, or All The Information You Want To Know To Develop A Good Plan

knowledge creation and use?

13. Will the community be able to participate in this process and learning environment?

After all, it is not about the tools or the content alone...it is about ensuring that students have the tools and content so they can learn what they need to become productive, responsible citizens and to do the work of their future. It is about a process that is thorough, inclusive, forward looking and focused on teaching and learning.

If you need to get a measure of where you are, here is a set of questions you can use to determine the state of the system vis a vis digital content:

#### TAKING STOCK OF YOUR DIGITAL CIRCUMSTANCES

1. What percent of the staff uses digital content? At what levels?

2. What digital content is being used?

textbooks

ebooks

newspapers and magazines

videos

webinars

other?

3. How is digital content being used?

Reference

Regular instruction

Compensatory instruction

Center for Digital Education Digital Content Strategy Guide, or All The Information You Want To Know To Develop A Good Plan

Enrichment

Homework

4. What percentage of students use digital content?
5. Do you offer online courses?
6. Do you allow students to take online courses from outside providers?
7. Do you offer hybrid (a combination of face to face and online instruction) courses?
8. Do you have a system technology plan?
9. Is the plan aligned with standards?
10. Is the plan aligned with the curriculum?
11. What delivery system do you provide?

own server

server as part of a collaborative

the cloud

12. Do all of your educators have computers in school?
13. Do all of your educators have computers at home?
14. What kind of access do your students have?

one to one provided by the schools

one to one (students bring their own computers) which must comply with school standards

Center for Digital Education Digital Content Strategy Guide, or All The Information You Want To Know To Develop A Good Plan

computer labs

COWS

some mixture of the above?

SOME IMMEDIATE SPECIFIC DILEMMAS HAVE BEEN IDENTIFIED:

- Is IT working with C& I in your schools?

It is acknowledged by many people that there is often tension in schools between the technology leaders (whatever their title) and the instructional leaders. Historically, many decisions about infrastructure and learning tools have been made without attention to why a particular choice would be better for a specific learning outcome and/or because certain choices were less expensive (school budgets are always inadequate).

For a school district to operate a successful digital content program there must be coordination and cooperation between these two groups.

- Is an LMS (learning management system) or even a CMS (content management system) enough?

Procuring an LMS or a CMS may sound very appealing and as if that is the solution to managing digital content. However, putting a single “product” in place is not a strategy. It is one decision you will need to make as you develop a comprehensive plan.

- Is online learning equivalent to digital content?

Providing online courses and/or requiring an online course for graduation is useful and even desirable but confuses the digital content issue. A digital content approach is much larger than online courses, although the latter can be part of the plan.

Online education depends on digital content but digital content is not online learning.

- Is a virtual school the equivalent of a digital content plan?

Virtual schools must use digital content, but digital content should not limited to them or

## Center for Digital Education Digital Content Strategy Guide, or All The Information You Want To Know To Develop A Good Plan

even to home schoolers (who have benefited enormously from the availability of digital content) and to students engaged in credit recovery for graduation.

Public schools, charter schools, private schools, hospital schools, all can enhance teaching and learning through the use of digital content and by providing blended or hybrid educational opportunities for students, as well as teachers.

### ----- WHO AND WHAT CAN AID IN THIS PROCESS?

#### Consortiums and collaboratives

In Massachusetts there is a non-profit collaborative organization for school districts in each of the seven regions of the state. Their original purpose was to provide special services for students in low incidence delivery programs. They soon became purveyors of other services such as professional development and group purchasing (small school districts benefit financially from aggregating). This kind of organization is perfect for providing planning services and economies of scale. Two examples: EDCO (<http://www.edcollab.org/>) and The Educational Collaborative (<http://www.tec-coop.org/>)

#### Business partners

On page 22 you will find a list of actions you can take to partner productively with businesses in your area. In addition to the financial and curriculum development aspects of such a relationship, career development opportunities for students (shadowing, internships, speakers) and professional enhancement for educators (internships) can be created for mutual benefit. There are many models across the country such as Leadership Initiatives for Teaching and Technology (LIFT<sup>2</sup>) (<http://www.lift2.org/>).

#### Local government

Since a major portion of the financial support for schools comes from local government, schools must take the leadership in getting everyone to the table and ensuring that accurate data are in the right hands before decisions are made. In the Union County Public Schools in North Carolina, the schools paid for first two years of one to one devices for the middle



Center for Digital Education Digital Content Strategy Guide, or All The Information You Want To Know To Develop A Good Plan

The instructional side must be integrally involved. The team should consist of these titled and/or equivalent positions:

Assistant Superintendent for Curriculum and Instruction

IT administrator

Technology instructional specialist

Teacher from every level

Subject matter leaders in all disciplines

Principal from each level

A few secondary students

In addition, the team should be advised by a broad based community group which includes:

A municipal leader

Business partners

Parents

Community organizations representatives

If possible, a local member of the state legislature (or his/her aide)

Giving each of these representatives a voice will enhance the decision-making, provide support for community outreach and advocacy, especially when funding is indicated, which it undoubtedly will be. Such an advisory committee can build partnerships for future development purposes. Many people understand the need for education to influence the development agenda rather than being driven by what others think the schools, students and teachers need.

-----

Center for Digital Education Digital Content Strategy Guide, or All The Information You Want To Know To Develop A Good Plan

THE CURRENT LANDSCAPE: A WIDE VARIETY OF APPROACHES

What some school districts have created:

1. Los Angeles Unified School District, the third largest in the nation, has a website which contains all their online initiatives.

<http://sites.google.com/site/onlinelearninglausd/>

2. The Henrico County, VA Schools developed the Teaching Innovation Progression Chart ...to provide teachers with a structure for self-reflection and growth. These rubrics ...are designed to help start the conversation about 21st Century Skills in the classroom.

<http://henricostaffdev.org/2010/01/19/teaching-innovation-progression-chart-tip-c/>

The K12\_CXO chart is available from Martin Yarborough at Dell

Also on <http://teachers.henrico.k12.va.us/elearning/> are all the digital activities the school district engages in.

3. Hall County, GA

The Hall County, GA schools have partnered with Dell to develop a new learning management system called HALLConnect that students can access with laptops, iPads and smart phones.

---

—BOX to side

“For us to sustain and stay on the front edge, we have to engage those forward thinkers around us” said Aaron Turpin (title is missing). Hall County Superintendent, Will Schofield, said “the way students are learning is changing, and districts must change, too. Much of what students have learned since they were born has come through a digital image such as television, iPods or computers,” he said.

"Schools need to be more like that so (students) don't feel like they power down when they hit the school door and endure their 6« hours with us so they can get out of school and do what interests them," he said.." Gainesvilletimes.com March 12, 2011

4. Vail, Arizona has a “one-to-one program where students are issued a laptop instead of textbooks...students bring their own laptops for use in classes instead of textbooks...an “Internet Bus” that turned a traditional school bus into a rolling study hall...the “Beyond Textbooks Initiative” which seeks to eliminate textbooks and provide digital content aligned to state educational standards, an initiative that has proven so successful that Vail has partnered with 20 other districts and charters across the state to make it more widely available. <http://www.vail.k12.az.us/?s=Digital+content>

5. Union County Public Schools, North Carolina developed School Web Site Guidelines which help to steer people to the right resources...( BOX)

Photo / Video / Website Release Form (printable)

English version

Español version

Copyright Guidelines for Multimedia Productions from the North Carolina Department of Public Instruction

Copyright Guidelines from the UCPS BOE Policy Manual (pdf files)

5-1 Selection of Instructional Materials

Responsibility For Selecting Media

Objectives For Selecting Media

Criteria For Selecting Media

Procedures For Selecting And Maintaining The Media Collection

Procedures For Challenged Materials

Request For Reconsideration Of Instructional Materials Form

5-2 Copyright Policy

Center for Digital Education Digital Content Strategy Guide, or All The Information You Want To Know To Develop A Good Plan

5-2 Copyright Policy Guidelines

5-2 Administrative Guidelines for Use of Instructional Videos

5-20 Computers, Networks and Related Technologies

5-20 Administrative Guidelines

Internet Acceptable Use Guidelines for Employees, pdf version

<http://www.ucps.k12.nc.us/>

6. The Hacienda La Puente, CA Unified School District developed the DIGITAL project, funded from a federal Ready To Teach grant, to improve middle school students' learning of mathematics. <http://www.hlpusd.k12.ca.us/rtt>

TWO USEFUL CURRENT RESOURCES:

1. Curriki, K-12 Open Curricula Community is a non-profit empowering educators to deliver and share curricula <http://www.curriki.org/>

2. SREB-SCORE Initiative: Sharable Content Object Repositories for Education) Initiative, SREB has identified quality digital resources ...The goals of SCORE are to improve teaching and learning and achieve costs savings through a multi state K-12 and higher education initiative to share digital learning course content among colleges, universities and schools in SREB states. SCORE membership is limited to SREB state education agencies and to schools or colleges designated by those agencies  
<http://www.srebonlineteachers.org/digitalContent.html>

A GLIMPSE OF THE PROVIDER SIDE:

1. Apple iTunes provides music, TV shows, movies, podcasts, books, photos  
<http://www.apple.com/itunes/what-is/>

Also iTunes University “a ... distribution system for everything from lectures to language lessons, films to labs, audiobooks to tours — is an innovative way to get educational content into the hands of students.” <http://www.apple.com/education/itunes-u/>

Center for Digital Education Digital Content Strategy Guide, or All The Information You Want To Know To Develop A Good Plan

2. PBS, Pearson Education, and BBC Worldwide, Discovery Education streaming and streaming Plus provide access to a topic- and keyword-searchable library of more than 155,000 items, including full-length video programs, clips, articles, still images, and interactive activities.<sup>3</sup> <http://thejournal.com/articles/2010/11/01/discovery-aligns-digital-content-to-common-core-standards.aspx>

3. Houghton Mifflin Harcourt Brace provides a guide for teachers, Using the Harcourt Ebooks, as well as resources for online learning. A look at <http://www.eharcourt.com/> shows the range of services. At <http://www.hmhco.com> you can see the multiplicity of offerings

4. Microsoft, Partners in Learning is a multifaceted program designed to help teachers use technology more expertly in their practice. <http://www.microsoft.com/education/pil/partnersInLearning.aspx>

## HOW TO WORK WITH BUSINESS, INDUSTRY AND VENDORS

1. Join an advisory committee for the company

If such an opportunity is not available at the time you are reaching out, approach the company. It is better to identify a person (ask if any students' parents works for the company and ask the parent's help) to speak with than to make a "cold call."

2. Listen to what they say

Schools can benefit from what businesses say they need to focus some of their programs.

3. Ask them about what they are willing to do for the schools

Sometimes businesses are constrained in what they can offer. It is good to know that up

---

<sup>3</sup> THE Journal, Discovery Aligns Digital Content to Common Core Standards By [Scott Aronowitz](#)11/01/10 From the web March 27, 2011

Center for Digital Education Digital Content Strategy Guide, or All The Information You Want To Know To Develop A Good Plan

front.

4. Ask them how the schools can help them

Schools can help to train business personnel, provide compensatory education for special groups, help develop professional programs for the company.

5. Tell them what you need

They may not be able to help but might propose an alternative solution or provider.

6. Create a team to partner with them to follow through

If the relationship has the promise of a long and mutually beneficial future, having several people in the mix spreads the benefits to both sides.

---

How far we have come

In the 1990s a high school art teacher spent a semester's internship in a technology company that manufactured devices. After a week of mutual exploration, the company asked her to help design their website.

---

## HIGHER EDUCATION MOVED INTO DIGITAL CONTENT BEFORE K-12

1. MIT led the way by placing all its courses on the web. OpenCourseWare <http://ocw.mit.edu/index.htm> One consequence of the decision, according to Richard Larson, professor at MIT, is that instruction has improved because faculty see themselves and each other.<sup>4</sup>

---

<sup>4</sup> Harvard University Advanced Leadership Initiative Think Tank: Educational Innovation and Technology, Leveraging Technology to Enhance the Relevancy and Quality of Education, April 2, 2011.

## Center for Digital Education Digital Content Strategy Guide, or All The Information You Want To Know To Develop A Good Plan

An example of current offerings: BLOSSOMS has been designed “to develop a large, free repository of video modules for high school math and science classes created by gifted volunteer teachers from around the world, seeded initially by MIT faculty members and by partnering educators in Jordan and Pakistan.” <http://blossoms.mit.edu/> The acronym stands for Blended Learning Open Source Science or Math Studies.

2. Harvard University followed by placing its collections on the web

[http://digitalcollections.harvard.edu/related\\_resources.html](http://digitalcollections.harvard.edu/related_resources.html)

3. Now many universities are digitizing their library holdings to preserve them but also to make them more readily available to researchers. K-12 schools can benefit from that availability. One example is Cornell University Library Digitization project

<http://www.library.cornell.edu/svcs/serve/scholarly>

### ON THE LEGISLATIVE SIDE:

There is a significant role to play by state legislators. Because education is a state function, states have the capacity to deliver on many initiatives. Especially in local control states, the state can assist educators in determining what should be “standardized” and what should be differentiated.

Here are ten actions a state can take:

- not limit the providers that can be used
- require online experience for high school graduation
- not have seat time requirement for graduation
- require digital content alignment with state standards
- require that teachers be prepared to teach with technology and provided with the resources, such as professional development and equipment
- administer high stakes tests digitally; encourages digital formative assessment

Center for Digital Education Digital Content Strategy Guide, or All The Information You Want To Know To Develop A Good Plan

- allow the purchase of digital content with textbook and supplies funding
- ensure high speed broadband for schools, teachers and students
- ensure all students and teachers have Internet access devices
- require that tech plans include digital content as a strategy

Adapted from Digital Learning Council Report <http://www.digitallearningnow.com/>

## SIDEBAR

Alabama is the third leading provider of K-12 distance learning.

Maine was the first state to commit to one to one access for every student and thus the leader in providing each student with a powerful learning tool. (Doug Levin, SETDA, April 2, 2011)

## HOW STATES HAVE RESPONDED TO IDENTIFIED DILEMMAS:

- In Feb 2011 the Georgia Senate voted 45-5 to expand the definition of "textbook" to include technical equipment.
- Florida has partnered with iTunes U offering "... an additional way to access the valuable educational content available from Florida's school districts, state agencies, and non-profit organizations. Florida on iTunes U brings together teaching, professional development, and cultural resources for educators and students."  
<http://etc.usf.edu/floridaitunesu/index.html> .

In addition the State Board of Education requires that by the 2014-15 school year, all "instructional materials" reviewed by state be "digital." Typically, the state reviews printed textbooks. It has deleted requirements that districts spend half their "textbook money" on state-approved books and instead require they spend half on "digital content."

[http://articles.orlandosentinel.com/2011-01-18/news/os-state-board-priorities-20110118\\_1\\_school-grades-middle-or-high-schools-john-padget](http://articles.orlandosentinel.com/2011-01-18/news/os-state-board-priorities-20110118_1_school-grades-middle-or-high-schools-john-padget)

- Utah passed a law in March 2011 that enables public schools, including charter schools, to

## Center for Digital Education Digital Content Strategy Guide, or All The Information You Want To Know To Develop A Good Plan

receive state payment for offering online classes. The bill also continues funding for the Electronic High School for another year before making the school compete with other providers for dollars.

- California created the “Free Digital Textbook Initiative ...to provide students, teachers and parents access to free digital high school textbooks that meet California’s rigorous academic content standards in 2009. “

<http://www.edweek.org/dd/articles/2009/10/21/01e-curriculum.h03.html>

- Texas passed legislation that allows schools and teachers to use traditional textbook funding for digital content and technology in 2010.

[http://k12blueprint.com/k12/blueprint/cd/Texas\\_Digital\\_Content\\_Brief.pdf](http://k12blueprint.com/k12/blueprint/cd/Texas_Digital_Content_Brief.pdf)

### THE GLOBAL MOVEMENT TO DIGITAL CONTENT

While this guide is focused on practices in the United States, it is useful to note where we stand in comparison with other nations. A December 2010 article by [Joseph Tryble](#) contained the following claim:

China and India are positioned to take a lead in digital publishing including e-books for use in higher education, digitalising existing content or developing digital avatars of print textbooks with enhanced features which, for example, can show up scientific diagrams in greater detail.

<http://www.universityworldnews.com/article.php?story=2010121022040248&mode=print>

According to one of our experts:

- In some countries content is mandated and lessons scheduled for everyone at the same time. In this “hands-on approach” governmental ministries heavily mandate and generate what content is to be used. The Middle East is an example of this approach.
- In others there is the “hands-off” approach. For example, in the United Kingdom, there are standards to which textbook companies write their books and lessons plans, but not uniformity of approach by schools is not mandated.

In some ways, of course, the issue of “central control” is similar to the United States. We have local control states such as Massachusetts and Wisconsin, and centralized control

Center for Digital Education Digital Content Strategy Guide, or All The Information You Want To Know To Develop A Good Plan

states such as Texas and California.

RULES AND POLICIES THAT NEED TO BE IN PLACE:

Understanding that “the digital content life cycle consists of six primary phases: create, update, publish, translate, archive and expire”

([http://www.digitalrightsdirector.com/digital\\_asset\\_management.html](http://www.digitalrightsdirector.com/digital_asset_management.html)), it is important to:

a. Centralize and “command” certain processes. There should be a single operational approach to

1. Management of assets: inventory, metrics, assessments
2. Procurement: practices, forms, intake mechanisms
3. Delivery: how to provide the content to users for consumption and production

b. Define quality

1. Has the content been evaluated and by whom?
2. If not, is there sufficient “testimony” from similar school districts so that your team can predict it will work in yours?
3. These days content must be aligned to a number of standards
4. Your instructional leaders should check out the authenticity and accuracy of the material

c. Require professional development

Align the offerings to the goals established

d. Develop and maintain responsible behavior

Anti cyber bullying policies: <http://stopcyberbullying.org/>

Center for Digital Education Digital Content Strategy Guide, or All The Information You Want To Know To Develop A Good Plan

Acceptable use policies: [http://en.wikipedia.org/wiki/Acceptable\\_use\\_policy](http://en.wikipedia.org/wiki/Acceptable_use_policy)

Anti-plagiarism mechanisms (respect for copyright), e.g. Turnitin  
<http://turnitin.com/static/index.php>

Responsible sharing, e.g. Creative Commons <http://creativecommons.org/>

## BOX

In ..."Addressing Risks Associated with Media and Digital Technology"....one must pay attention to:

Content risks – This includes exposure to potentially offensive or harmful content, including violent, sexual, sexist, racist, or hate material.

Contact risks – This includes practices where people engage in harassment, cyber bullying and cyber stalking; talk with strangers; or violate privacy.

Conduct risks – This includes lying or intentionally misinforming people, giving out personal information, illegal downloading, gambling, hacking and more.

pg 27 Digital and Media literacy: a Plan of action. The Aspen Institute, written by Renee Hobbs 2010

## CONCLUSION

Finally, some brief words of advice... DO NOT

1. Choose the "coolest" device as your strategy
2. Progress one classroom at a time. Pilots are fine but that means some planning has occurred.
3. Let anyone talk you out of moving to digital content...it is the future.

## Center for Digital Education Digital Content Strategy Guide, or All The Information You Want To Know To Develop A Good Plan

You now have all the elements needed to create a plan in which to align the elements. No one can create a plan for you in a document such as this guide. What this guide has done is identify and organize all the elements you must consider. Much of the information you can also use as part of a tool kit for educating the people and organizations from which you need to acquire well informed support.

We have given you a rationale (page...), several sets of questions you must answer (pages...), some models to explore (pages...), resources to examine (pages...), suggestions for working with the community and business partners (pages...), and advice about how to proceed.

We have provided you with some tools to develop and implement a digital content strategy (see page....). The next steps are yours. They are important steps because they can vastly improve the education of your students. They also direct your system into the inevitable future of learning.

### Key Resources:

1. Digital Learning Council <http://www.digitallearningnow.com/>

[The Elements of Digital Learning](#), along with actions for lawmakers, were released at the 2010 Excellence in Action National Summit on Education Reform on December 1 in Washington, D.C.

**Measuring Progress to Quality Digital Learning:** In 2011, the initiative will begin grading each state based on the Elements of Digital Learning. The first report card will be released at the 2011 Excellence in Action National Summit on Education Reform on October 12 and 13 in San Francisco, California.

2. COSN

<http://www.cosn.org/Portals/7/docs/Web%202.0/Acceptable%20Use%20Policies%20Web%202020%20Mobile%20Era.pdf>

This document and the organization which published it provides leadership for education leaders. This guide is about policies and procedures for technology use in schools.

Center for Digital Education Digital Content Strategy Guide, or All The Information You Want To Know To Develop A Good Plan

3. Keeping Pace with K-12 Online Learning. <http://kpk12.com/>

“Online learning at the K-12 level has grown so much in recent years that the main issue in most states is no longer whether or not online learning is occurring, but rather **how** it is being implemented,” according to the home page. The focus is on states and virtual schools. There are several years of reports about progress and challenges in online learning.

Thank you to the people who were kind enough to be interviewed: **(NEED DETAILS FOR PEOPLE BELOW)**

Blake Chism, Dell, former IT,.... School District

Michael Droe, Dell, former IT,.... School District

Adam Garry, Dell subject matter expert

Kelly Hodges, Dell subject matter expert

David D. Kafitz, Jr., Ed.D., Executive Director, Technology Services, Union County Public Schools, Monroe, NC

David Langridge, **Title**, Microsoft

Robert Moore, Dell, former IT, **Name** School District

Keith Price, Dell, former IT, **Name**.School District

Themistocles Sparangis, Ed.D., Chief Technology Director, Educational Technology & Customer Support, Los Angeles Unified School District

Chad Stevens, Dell, former IT, **Name** School District

Aaron Turpin, **Title**, Hall County School District, GA

Thomas Woodward, Assistant Director of Organizational Development- Instructional Technology, Henrico County Public Schools, Virginia.

Center for Digital Education Digital Content Strategy Guide, or All The  
Information You Want To Know To Develop A Good Plan

Martin Yarborough, Practice Executive - Educational Vertical Solutions Dell / former school  
Name district CIO.

*Caveat: This guide contains many urls. Urls sometimes disappear. If you find one that is no longer  
viable, we apologize and suggest searching for a similar topic.*