

Digital Curriculum Challenges

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Mandates and Funding

No matter the size of your district, money must be factored in to your digital migration plan. Traditionally, state funding has been mandated for paper content, but this is beginning to change. Some states have rigid guidelines on the use of state funding for digital content, including statutes that do not allow multi-year subscriptions. The challenge is how to determine the return on investment of creating digital content, which depends on the cost models that providers will have. It also involves figuring out how to ensure that schools are getting the best product and service for what they spend. In some districts, choosing content will depend on what the state chooses based on state and Common Core Standards.

Your school district may be required to demonstrate savings with digital content. Given the relatively new digital content industry, long-term significant savings remain to be seen. Fortunately, private industry is speaking with education about these issues. Industry leaders are working together to figure out how they can make the transition to digital content work and the actual implementation beneficial and reasonably priced.

When determining funding, it's important to remember that your timeline and strategy for transitioning to digital content can have a large impact on actual cost savings. When digital content is implemented in a fragmented fashion, implementation may be more costly in the short term. In most cases, a full roll-out in one or two phases is financially beneficial.

For up-to-date information on state policies and funding mandates for digital content, visit Keeping Pace with K-12 Online & Blended Learning at <http://kpk12.com>.

Equity and Access

When migrating to digital content, it may be challenging to establish equal access across schools in the district. Virtual schools must use digital content, but digital content should not be limited to just virtual schools or students engaged in credit recovery for graduation. Public schools, charter schools, private schools and non-traditional schools all may enhance teaching and learning through the use of digital content by providing blended educational opportunities for students.

Once equity has been established, another challenge is providing access. How can teachers and students get to the digital content? Ideally, a school would be able to provide each student access through his or her own device. However, funding and other issues can make this a difficult goal to accomplish. Other access solutions include mobile computer carts, computer labs, and

BYOD initiatives. Regardless of the device model that is implemented, a district will benefit from having one central location (for example, a virtual desktop or LMS) that provides one-stop access to the content.

Teacher Buy-In and Training

The migration to digital content requires a significant amount of curriculum analysis and redesign in order to take full advantage of the features of technology. Teachers may say they are on board for technology integration, but they also need to be aware of the impact it has on their teaching approach. Leadership in the school can encourage teachers to be innovative and to fully embrace instructing in an environment of digital content. In many schools a culture change is required to enable collaboration and knowledge production, not just consumption, by students and teachers.

Professional development for digital content implementation should be strategic and widely available. Consider multiple offerings to meet varying levels of technology expertise, background, and teaching styles. Inevitably, you will encounter teachers that are hesitant to use technology, while other teachers are eager to start but do not have access. Also, be prepared to address the challenge of teachers who choose not to participate in the digital migration.

While initial training will be the most significant in terms of cost and time, you will also want to consider a plan for ongoing professional development. Technology changes rapidly, and teachers will need continual support in order to raise and maintain student achievement.

Plagiarism, e-Cheating and Copyright Infringement

Digital content requires a school to rethink its digital citizenship curriculum. Direct instruction on Internet safety, search strategies, copyright, and netiquette can also be incorporated into a digital curriculum. Proper training will help ensure that all students are well-prepared to begin using technology every day in a safe, respectful, and

responsible way. When combined with a well-defined AUP, a unit that specifically teaches digital citizenship may lead to fewer issues within the program. Keep in mind that your school's existing AUP may need to be rewritten to include issues specific to digital content, mobile devices, and applications.

Network Infrastructure

A digital migration will increase the number of networked devices at school, creating heavy demands on your network infrastructure. A comprehensive, long-term networking plan is required to ensure the success of digital content implementation.

When planning for network infrastructure, be sure to consider how the network will be able to handle a large number of devices simultaneously, for example, at the beginning of class periods when students log on to the network at the same time. You might want to consider multiple access points to provide reliable network access 24/7. Another challenge is to ensure that you have enough bandwidth to handle multimedia applications, and that the network infrastructure has capacity for growth.

Digital migration also brings with it a host of security concerns, including data protection and compliance with the Children's Internet Protection Act (CIPA).

- How will you protect student information and avoid data security conflicts?
- How will you protect your network from viruses and malware?
- Will students be protected from unsolicited email and inappropriate sites?
- How will you monitor Internet usage?

Protective wireless infrastructure provides a segmented student network that is separate from the one used by teachers and administrators, thereby avoiding data security conflicts and protecting student information. Built-in authentication procedures enable monitoring of Internet usage while ensuring that only legitimate users are allowed to access the network.

IT Resource Demands

The migration to digital content naturally demands an increase in digital devices for student access. This sharp increase the number of devices poses a challenge for an IT staff already tight on resources. An emerging trend of desktop virtualization is beginning to address this challenge.

With desktop virtualization, students and teachers log in and access apps from any campus location with Internet access. This allows IT staff to manage a diverse range of applications and user data easily from a central server. Another advantage of virtualized desktops is that the infrastructure can be securely outsourced. In addition, districts can save money on software licenses and streamline the path toward digitized content.

Maintenance and Upgrades

One significant challenge with digital content is the inherent need for regular updates and maintenance 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 replacing and upgrading hardware and network infrastructure needs to be part of the total plan.