the LEARNING COUNSEL

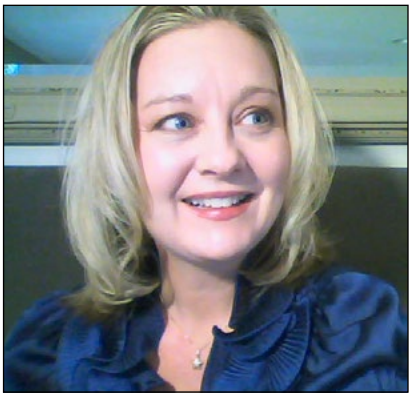
SPECIAL REPORT

Digital Curriculum Strategy

Model Architecture

In This Issue:

Point of View



The idea for a Digital Curriculum Transition Model Architecture came about organically, springing to life from the dozens of events we've been producing. We've surveyed, we've interviewed, we've spoken to tons of school executives and what could not be clearer is the soul-wrenching, grasping need for coherent direction almost everywhere. With more than 7,000 digital curriculum and content publishers now just in the U.S. K-12 market space, and nearly 75% of all students having computing devices for a significant portion or all of the school day, we are in a whirlwind of change.

Last November we brought together 50-some senior education leaders from dozens of schools into New Orleans for our special national "Gathering" event. Mid-day we rolled out 72 pounds of Mega Bloks. We gave a small sketch of what a model architecture might be like and let each table of 4-8 people "have at it" building their own and labeling each block.

Some tables looked flummoxed, either silent or in heated conversations, waving fists of blocks in the air and making loud points about what should go in what order of strategy. Adults fell to fits of giggles as they hefted the blocks. Each individual did their own building-and-labeling at one table.

At the end of the exercise the whole group visited each other's tables to hear about the strategy constructs. One built their Mega Blok strategy to "resemble a whole child" and labeled all the parts to show how their strategy was considering real learning. Another used a cantilevered block and labeled that the "pumping station" for the probability that as the strategy went forward they would have to "pump out the baloney" coming from various factions, just like the pumping stations there in New Orleans are always in operation else the city sinks into the sea-water that surrounds it. Superintendent Mary Ellis enthusiastically showed how complete her table's strategy was considered, having been the only table to talk-through what they would do and then trigger frantic activity to do their build-and-label in the final moments. Others had the entire group in uproarious laughter. We all learned from the blocks and were surprisingly proud of each other.

We transformed into a purposeful group in that exercise, built up a camaraderie of shared pain, observations, and hopes for change. People new to me at this event gave me giant bear hugs of gratitude before leaving. We had all bonded.

I wanted to spread the love and send you this compendium of strategies and discussion. Enjoy!

LeiLani Cauthen, CEO & Publisher

Table of Contents

LeiLani Cauthen, CEO & Publisher

Well versed in digital content and curriculum change, the adoption process, successful strategies, and helping schools understand what's available and what will work, LeiLani often writes on the changes and future of the education space. She is a media, research, marketing and sales professional with 26 years of experience in the high tech, government and education sectors.

David Kafitz, Ed. D., VP School Relationships & Consulting

Expert and charismatic change-agent, David helps schools move forward with a well-reasoned strategy for digital content and curriculum, professional development and IT strategy. He if a former Superintendent, Director of Technology Services, Principal, and Teacher in North Carolina Public Schools.

Digital Transition Model Architecture

A Best-Practices Approach to Effectively Transitioning to Digital Curriculum

The last twenty years have been a time of unprecedented advancements in technology and its integration into society. Embracing those advancements is key to creating an educational system that fully prepares students for the modern world. The process has plenty of pitfalls and risks, but a solid digital curriculum strategy and architecture can guide a school district through the transition and into a fully digital education age.

The Current State of Digital Education

While computers and devices have been extant for many years, the price point was often too high for wide-scale implementation to be practical for school districts. During the 1980s, 1990s, and 2000s, when every other industry was making the transition to a digital-centric environment, the educational system was left behind. For a long time, the best they could do was computer labs and single computers for whole classrooms.

DEFINITION:

(A School's) Digital Resources Transition Architecture is the mixture of systems, individual resources files, tools and hosted or internet subscription based immersive-environment-adaptive digital courseware, and online service providers; arranged in such a way to provide a means of archival and retrieval, communications or activities, and meaningful coverage of needed subjects and topics by grade or age as required against a curriculum map.

Everything changed a few years ago with the introduction of low-priced tablets such as iPads. The lower price point made it possible for a superintendent to afford to begin placing numbers of devices into classes, if not into the hands of every student. Except there was one problem: what was a student supposed to do with their device? More often than not, the device became an auxiliary tool that was only used occasionally.

The Learning Counsel's research indicates that more than 70% of students have a device in their hands for a significant portion of the school day, either their own device, a school-issued device, or off a cart or in a lab environment at some point.

Embracing Digital Curriculum

The key to getting the most out of digital technology is to take the lead from other industries that have successfully made the transition. With the right game-changing software, computers that were once secondary tools became the central method of getting work done in the office. Adobe products changed the way creative tasks were done, and CAD software pushed the drafting tables right out of the office. When it comes to education, that game-changing software is digital curriculum.

So while getting devices into the hands of all of the students in a district is a good step, it's only setting up the infrastructure. Digital curriculum is needed to take full advantage of the devices. In order for it to be as effective as possible, the right strategy and digital curriculum architecture must be in place.

Changing the Approach to Education on a National Scale

Implementing digital resources of any kind isn't just adding something to the classroom that students can use once they've finished with everything else. Real digital curriculum represents a change in how students are educated using various resources and a change in the entire approach to teaching. Full implementation involves a lot of work, planning, and investment, so it behooves a school district to make sure they're taking the right approach. The best way to do that is to avoid strategizing in a vacuum.

Digital curriculum is currently being implemented across the country, and the conversation is taking place on a national scale. The widespread discussion represents one of the greatest resources for school districts. School districts looking to transition to a digital curriculum should seek out gatherings of fellow educators who are going through the same process. Additionally, there are publications and reports which compile the ideas,

> "The goal of digital curriculum implementation is to bring all school districts into the modern digital age and revolutionize the field of education.."

strategies, and successes from across the country to help provide guidance.

There have already been successes. Many forward-thinking school districts have whole-heartedly embraced digital curriculum and have made great strides towards implementing it. They'd be the first to admit that they've still got more to do, but studying their successes is a good place to begin for a school district just starting down its own path.

Implementation Should Start with Strategy

As stated above, getting devices for students only lays down the infrastructure that requires curriculum for implementation. It can be tempting to make this the first step, but that can be a rash decision. Before distributing devices, a district's first focus should be on developing a strong digital curriculum strategy. But what exactly does that mean?

A good digital curriculum strategy starts by organizing all of the pieces available, and there are quite a few in play for school districts. These include:

- Portals
- Devices
- Networks
- Professional Development
- Apps
- Office Suites
- Collaboration tools such as video conferencing
- Paid Subscription Services
- Free Subscription Services
- Digital/Digitized Elements (such as documents, video, e-books, lesson plans)
- Resource services (such as plagiarism checkers, online chat staffing, special needs such as speech therapy distance educators, Youtube and more)
- Drivers (for printers and 3D Imaging)
- Learning Management Systems (LMS)
- Student Information Systems (SIS)
- Instructional Management Systems (IMS)
- Library Management Systems
- Talent Management Systems
- Financial Management Systems
- Procurement Management Systems
- Device Management
- Technical Skills Software such as Adobe Illustrator, or AutoCAD
- Project based hybrids (such as software to run a robot or science instruments and calculators)
- Other tools such as clickers, polling, testing devices, whiteboards, portfolios

This list is added to on an almost continual basis as new publishers provide more digital curriculum and tool choices or refine the systems that deliver them. A strategy needs to account for these pieces and figure out how they're going to be used within the new system.

Taking Budget into Account

Part of any strategy is figuring out the budget. Superintendents often say that they don't have the money for digital implementation. While this is a valid concern at first, the more that a curriculum becomes digital, the less need there is for the purchase of textbooks. Eventually, digital curriculum will replace textbooks all together, and free up more than enough budget to pay for itself.

Keeping this in mind, a district should consider how much they have to spend on the transition, since this will partially determine the speed of implementation. Districts with extremely tight budgets may need to draw out implementation, while districts with slightly more of a technology budget can fully transition to digital curriculum at a much greater speed. Regardless of district's budget, it's important to begin the process, even if it's at a slow pace.

Tactics vs. Strategy

During planning, it's important to understand the difference between tactics and strategy. A tactic is an individual action that is taken in the implementation of a larger strategy. An example is the distribution of iPads to all students. This is a tactic, and a perfectly good one as long as there is a strategy backing it up.

A good strategy will provide the oversight and direction to use those iPads to change the students' approach to education.

And that is one of the strengths of a strategy. When digital innovations were previously offered to students, like a computer in the classroom, the decision of how to use it was often made on a teacher level, such as what programs might be on it. Fully implementing digital curriculum is simply too large of an issue to be decided on a classroom by classroom basis exclusively. In order to be effective, a strategy will lay out how every part of the curriculum goes together. Take the straightforward task of taking notes. There are a large number of note-taking apps out there. Deciding on a single note-taking app that students will use through multiple grades means they don't have to learn a new app with every new grade level.

What's interesting is that many school districts are already set up to accommodate this oversight. School boards were originally created so there would be a vetting and oversight process for the materials used in curriculums. That same process should be applied to new digital curriculum materials. Rather than simply letting students use any app, or letting teachers select the apps that they like, a good strategy can ensure that every app available fits the overall strategy.

Building the Digital Curriculum Transition Architecture

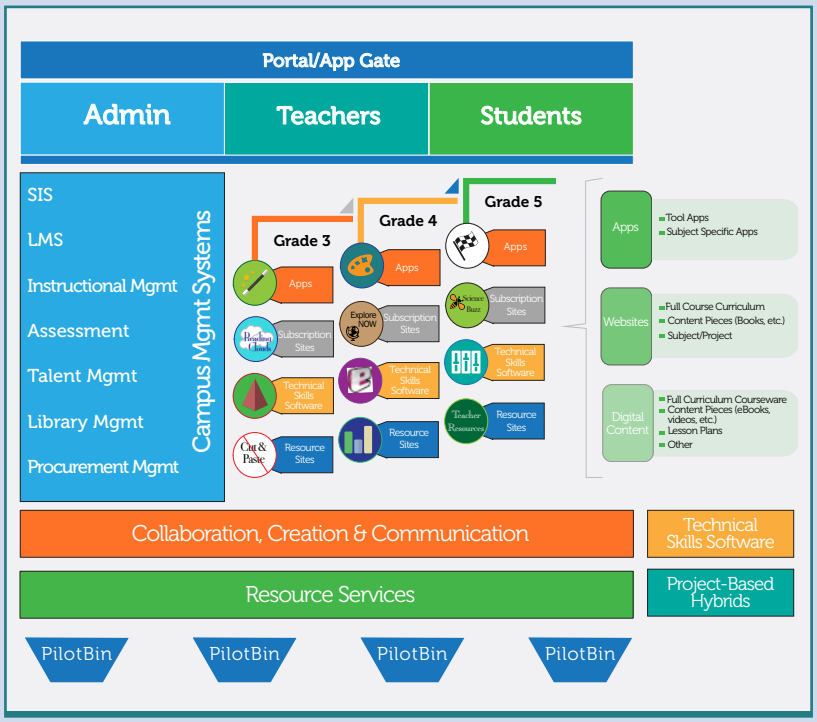
School districts usually already have resources available to help in formulating a digital

Presentation Layer:

How will students, teachers, parents and administrators access content? Portals and App Gates.

Campus Management Systems:

- Administrative tools such as:
- Learning Management Systems for housing content, quizzes, homework assignments, and facilitating communication and collaboration. May house individual learning plans (or these may be in another system.)
- Student Information Systems for enrollment, grading, assessment data, student attendance calendars, other data reporting (District and State), and longitudinal behavior and achievement data.
- Instructional Management Systems for housing teacher created materials, lesson plans, and resources.
- Assessment Systems.
- Talent Management and Human Resources Systems for tracking professional development, training and staff assets.
- Library Management Systems.
- Procurement Management Systems



Collaboration, Creation & Communication: Video conferencing systems, social media, Office365 or Google Apps for Education.

Curriculum & Content: Apps, subscription sites, other resources including textbooks, etc.

Technical Skills Software: Professional software such as Adobe Illustrator, AutoCad, Robotics Software, etc.

Resource Sites & Services: Sites acting as directories, YouTube, plagiarism checkers, Whiteboard lesson sites, lesson plan sites, etc

Project-Based Hybrids: Robotics software, lab probeware, calculator and other mathematics or physics software, science and art software.

curriculum transition architecture, especially in the area of personnel. These are a great asset and should be brought together early in the process. For example, normally the Chief Information/Technology Officer will function independently of the Curriculum Specialists. In a digital curriculum strategy, both of them should work hand in hand to construct the digital curriculum architecture.

To help provide a starting point, the Learning Counsel has put together a model digital curriculum architecture. Data used to construct the architecture was gathered from interviews with hundreds of education leaders and publishers, as well as discussion meetings in nineteen cities across the country. This is a basic, symbolic architecture that can be adapted to fit the unique requirements of each school district.

The architecture provides a graphical representation for the organization of a digital curriculum structure. A portal at the top controls access to the system as a whole, and users are typically directed to three different access points or levels to differentiate for administrators, teachers, and students. Administrators are given the capability to oversee the individual pieces and larger systems of the curriculum, while teachers and students, including parents, have access relative to their roles.

Tying all of that together is how the pieces communicate with each other, such as integration between apps or inter-school cloud computing. Additional resources and services are available as needed, such as plagiarism checkers, directories, or white board apps for lesson planning.

Pilot programs, shown at the bottom of the architecture, are key. Digital curriculum is a constantly expanding field with constantly changing assets. Pilot programs allow a school district to explore additional options in a safe environment and further refine their system as they progress.

No School District is on Their Own

The articles that follow in this Special Report include stories from education leaders who have worked hard to implement digital curriculum in their districts or states. The solutions they used to overcome their struggles can help districts new to the process take charge of their own transition.

The goal of digital curriculum implementation is to bring all school districts into the modern digital age and revolutionize the field of education. It's a large undertaking, but the rewards are well worth the effort. And the best way to arrive at that goal is for school districts to collaborate, innovate and thus progress.

Top 5 To-Do

1) Assess current policies – what restrictions are there and what freedoms do you have?

2) Take an inventory of what your district, your schools and your individual teachers each have for digital content resources or curriculum assets.

3) Have teachers make a rough subject list of what they teach and against it the preferred pedagogy. Compare and contrast that pedagogy against the choices for digital materials. The teacher can chose to use simply augmentative materials to help engage students, just documents or simple apps or videos. At an intermediary sophistication level, the teacher could also chose simple substitutes for past textbooks from "chunked" texts purchased from publishers or obtained from open resources and build lesson plans around those. At the most sophisticated commercially-available level of software, the teacher could go with new "immersive-environment-adaptive digital courseware," full of functionality including animations, gaming rewards, complete libraries and intelligent learning engines that fit the units to the individual student and allow the teacher uber levels of personalization and analytics.

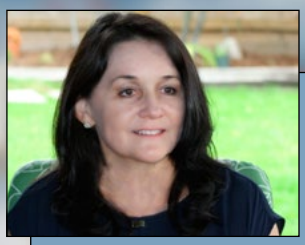
4) Have a plan for transition by subject, by grade, by teacher – and don't bite off way more than you can chew in the first year.

5) Have a plan for professional development. (We suggest also looking at online PD subscription resources like RedBird Learning.)

Contact the Learning Counsel to learn about using a full administrative scale to set goals, write policies and actually execute wisely and in a timely manner all of the above and your own custom strategy.

Reconstructing Education

Are We Simply Renovating or Are We Tearing The System Down and Building A Whole New One? The Learning Counsel Talked with Executives in Five Wholly Different Districts and Found Pedagogy Redefined and Startling Learning Outcomes for Both Students and Teachers.



"It's not a matter of *if* we transition to a digital curriculum, it's a matter of how fast."
(see page 16)

"If we don't declare it a human right to have access, then we are only perpetuating a gap in the digital divide amongst the haves and the have-nots. And we can't have that."
(see page 12)

With thousands of publishers selling hundreds of thousands of curricula, apps, games and other types of software content for students, it's no wonder many executives are having a hard time finding the right blueprint to follow and the new tools they need. In fact, while visiting 22 different cities for digital curriculum discussion meetings, the Learning Counsel found schools in many parts of the nation still digging themselves out of the rubble of old text books and outdated pedagogy.

Now no one likes to tear down the long-standing tried and true systems of our nation. But recent history is showing—no proving—that our education system needs restructuring. They just aren't working. And just as the old tenement must be torn down to build the new shinny skyrise and a new manufacturing facility brings new business and new life to a community; education needs a rebuild.

Five trailblazers in education bring us into their worlds and show us what it is taking to transform their schools. Here is how the strategic "blueprints" were drawn, budgeting for "plumbing" to be replaced to get necessary infrastructure and bandwidth, "framing" was rebuilt for devices and PD was implemented for the ones that make it all happen. Here is the reconstruction process they followed to create shining new classrooms where teachers and their students are raising the roof with dramatically improved assessment scores and enthusiasm for learning.

Innovation Through Cooperation

The New Jersey Department of Education Takes a Strategic Approach to Digital Implementation

The New Jersey Department of Education serves over one million students and oversees close to a hundred thousand teachers. Developing the strategy to roll out digital curriculum to all of them is a large undertaking, but as Director of Innovation, Takecia Saylor is up to the task. She heads up innovateNJ, an initiative designed to bring access to all of New Jersey's students.

InnovateNJ: iZone implementation, Jersey Style

Innovation zones, or iZones, are rolling out across the country. Innovation zones are established on a state or city level to create autonomous school districts that can explore new educational strategies. The idea started with a handful of states in the late 1990s, and the last couple years have seen a surge of states adopting the idea. Now in its second year, innovateNJ is New Jersey's take on the idea. Their strategy is based on three core concepts:

- **Community:** There are a lot of good ideas out there, and Saylor wants everyone to have access to them. Schools are asked to share their successes with other schools, including posting videos on a central website.
- **Clearinghouse:** Educators get to see what's being done in other locations so they can implement them in their districts. This component also includes providing a list of resources to educators such as funding opportunities or qualified education vendors.
- **Initiatives:** Educators have access to a wide variety of education initiatives, and not just digital ones. This section includes a wide variety of programs for educators to innovate their curriculum.

The New Jersey State Education system is very localized, and innovateNJ integrates this factor into their strategic planning. Innovation happens a school district level, since local educators are the ones who know what's happening with their kids. Instead of a centralized authority that hands down curriculum, innovateNJ and the Department of Innovation act like a mentor, empowering districts, educators, and communities.

Reaching All of the Students

It's vitally important to Saylor that all students have access to digital curriculum, and innovateNJ is designed to expand access on several levels. One of these programs is to expand community integration. Modern communities have a wide variety of WiFi access points, including libraries, Boys and Girls

Spotlight: Voorhees School District

The Voorhees School District is located in Southern New Jersey. When the district became part of innovateNJ, Assistant Superintendent Dr. Diane Young kicked off the process by forming an Innovation Committee with all of the key players, including curriculum specialists and content supervisors.

A key part of her strategy was the creation of a Branding Group to answer:

- What do we want to be known for as a school district?
- Who are we as a school district?
- What do we stand for?
- What results do we want for our children?

Digital innovation represents a complete change of educational culture, and integration requires a shift of approach. By setting up the Branding Group, Dr. Young was able to keep the program focused and bring educators together at the same time.

Clubs, mom-and-pop stores, even fast-food venues. The innovateNJ program works with school districts to develop game plans for reaching out to these community organizations to help give access to students who don't have online access at home.

The response to their strategy has been overwhelmingly positive. "We've been surprised at how open folks are to sharing with our students in that way," Saylor says. "It makes us very happy to know that there's something that can be done to facilitate that."

Another strategic factor is the utilization of early adopters. As part of joining the program, each school was asked to partner with another school that represented a student demographic 180° different from their own. This gives students who would normally be considered disenfranchised a partner on a high leadership level, and helps to close the gap of digital access.

Bridging that gap is a key focus for Saylor, and she views access as a human right. "If we don't declare it a human right to have access, then we are only perpetuating a gap in the digital divide amongst the haves and the have-nots. And we can't have that."

Advice for School Districts

The best place to start in developing your digital curriculum strategy, Saylor says, is with a human capital assessment. Review all of your available resources, their skills, and their available assets—teachers, parents, early adopters, students, even community organizations. After implementing this assessment, many school districts were surprised to find out how many resources they already had available amongst their staff, and how many of their educators were already certified in the necessary skills to create or implement digital curriculum.

Using existing resources also has the advantage of making implementation and adoption easier. Instead of being instructed via a top-down method, teachers are being taught by their fellow teachers. The result is a collaborative process that brings teachers and school districts together, increasing the effectiveness of the program.

But What Do Students Think?

The students have had nothing but positive things to say about their experience and are much more engaged when interacting in a digital medium.

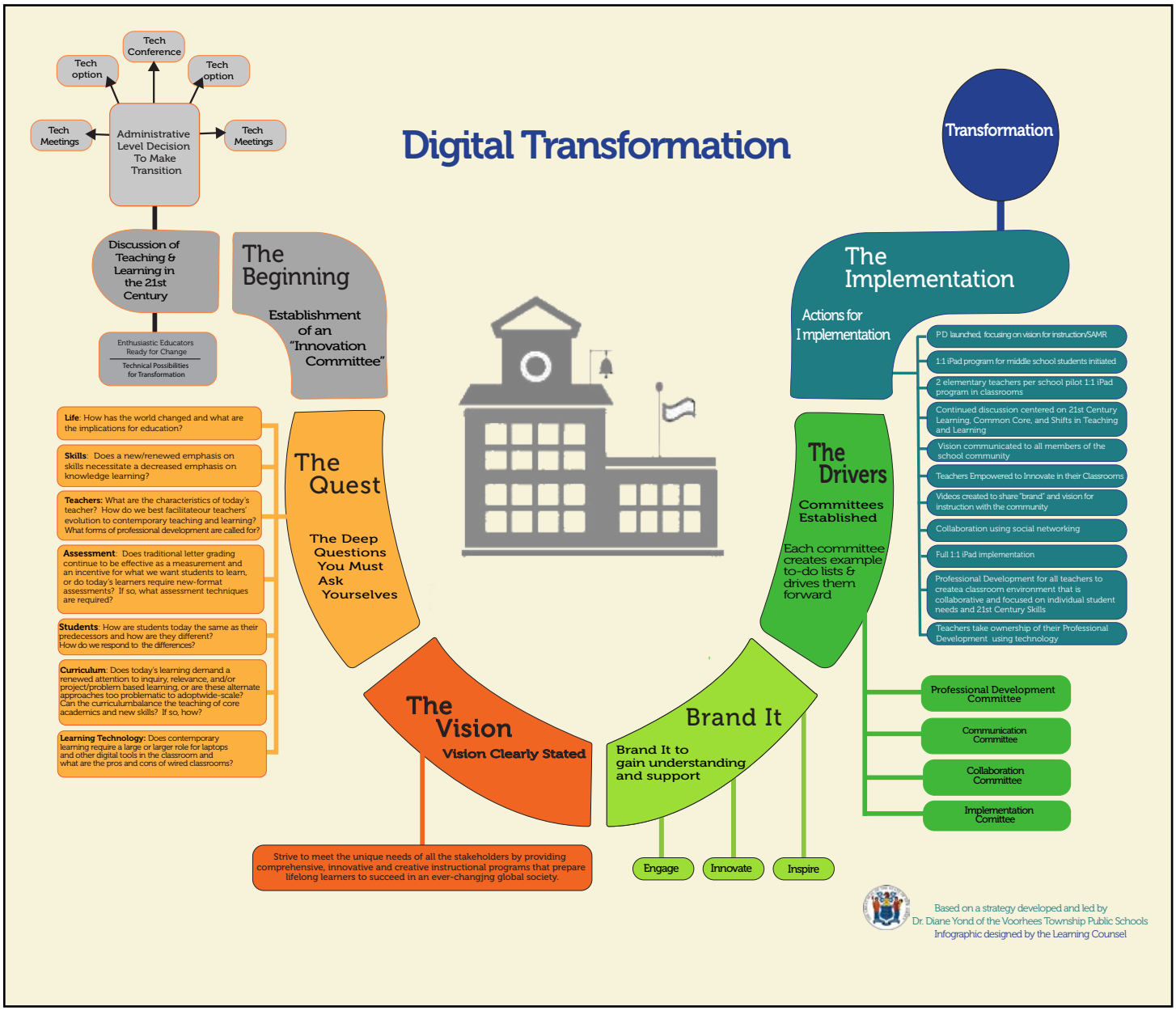
Students have even taken to connecting over their phones or meeting in coffee shops to teach and work with each other.

Some students are even developing their own educational apps. Creating these helps students teach themselves concepts that they had trouble grasping in a traditional setting. These apps are then used to help educate their friends, empowering students to take charge of their own education.

Excited for the Future

The task of implementation and innovation may be tough, but Saylor thinks that all of the work is well worth the rewards for students.

"I'm excited about it because it means that it broadens our landscape," she says. "When you start talking about curriculum that's delivered in a virtual medium or 'online' way, it really opens up a world of possibility. Students learn that there are like minds, learn about different cultures, and can have an education experience that really does create a diversified student population with a broadened perspective—a heightened level of experience that extends beyond their everyday surroundings."



Currently serving as the Director of School Innovation for the state of NJ. Takecia was also the Manager of the New Jersey Department of Education Race to the Top Project and a is an Executive Leadership doctoral candidate at Fordham University. A 1993 Milken Scholar, Takecia has compounded her background in business with education administration experience to forge successful leadership opportunities for the past twenty years.

For the complete interview with Takecia Saylor, visit learningcounsel.com

Houston—Where Personalized Learning Comes of Age

When Houston's initiative, PowerUp, was announced two years ago, Beatriz Arnillas became one of the key players in organizing the digital transition. "The first thing we thought about was our pedagogical model—what did one-on-one really mean? How could we utilize technology to enhance and transform teaching and learning? If teachers and students are going to have devices, what does this mean in the classroom? And when they go home? Do their homes have WiFi? If not, how much storage will they need overnight for homework? We're a large urban district, so a lot of our students come from low-income homes where wifi might not be available."

Acting as a senior technical consultant to all the schools in the system, Beatrice sits on a number of committees and strategic decision-making groups. When the transition was launched, she was able to work with other leaders on critical decisions about devices, content and infrastructure. "When you purchase a textbook, you're making a purchase for 10 years," said Beatrice. "In a district this size, we're talking about a sizeable budget. How would that kind of planning apply to digital curriculum?" With millions of dollars in curriculum materials to be considered Houston focused first on their strategy.

For the past year, every curriculum adoption at the high school level in HISD has been completely digital. "That's digital, not digitized," Beatriz clarifies. And when it is absolutely indispensable to get paper and ink, even at pre-kindergarten through eighth grade, Beatriz's groups are taking a very close look. "You still have to ask," said Beatriz, "What will they be doing at this level in ten years?" She added, "These are hard decisions."

Houston realized early on that such decisions cannot be made aloof in the central office, remote from the classrooms and teachers that will be impacted. "You have to make sure that every department and stakeholder is involved. These decisions cannot be made in isolation by the curriculum department. When you begin this process, you have to find the solutions together."

"One thing that happens when you swing open the door to digital is that you realize how many more options there are. You are no longer in total control of the learning in your classroom—your students are gaining more and more control of their learning process." Another thing Beatriz did personally, realizing the students were in many cases more familiar with working on digital devices than the teachers, was to talk with them directly. "What can I do to help you learn better?"

> "It's not a matter of if we transition to a digital curriculum, it's a matter of how fast."

In Houston, they no longer talk about teaching—they now say teaching and learning.

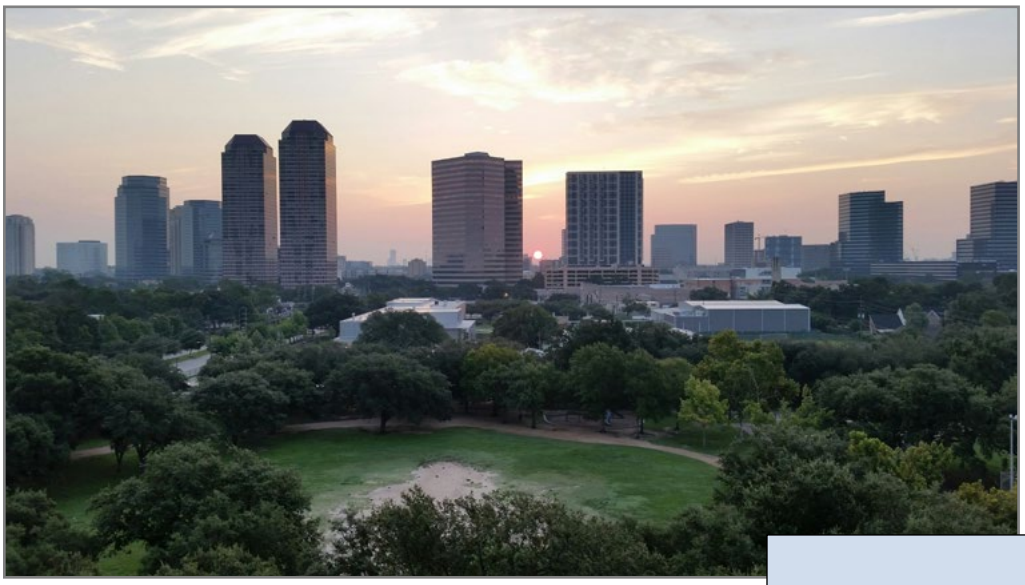
One major concern they encountered had to do with the individuality of their teachers. "Strong

teachers will have no problem curating content. They will go online; they will search from multiple sources we have provided, and from free sources." New teachers, or those with less experience tend to need more guidance, which means, as part of strategy planning that the curriculum department would have to create more specific planning guides to help teachers leverage their available content.

Another aspect Houston explored is how to bring teachers into a more amenable frame of mind as regards transitioning to an all-digital curriculum. An example of this is student workbooks. "A workbook is consumable. You have to buy one for every student, and every year. You consume it then throw it away." Moving to digital, a teacher has to think about how to assign the lesson, and how to receive the response—paper and pencil, or electronic media? The initial reaction is usually discomfort when moving away from the familiar framework.

To tackle this potential barrier to implementation Beatriz' groups identified the early adopters—those teachers who are willing to jump right in or who are already using technology on their own—and enlist them to help other teachers through the change, a sort of peer-to-peer transition support. "There isn't an answer that fits everybody. That's one of the things we as districts need to think and remember. Our teachers come from different backgrounds and they have different levels of strengths—and we have to support all of them.

While there are so many details to the transition, Beatriz and her team in Houston have shown key pieces that would be part of any strategy to smooth ridges and give successful pathways to reaching the end goal. In Beatriz' words, "It's not a matter of if we transition to a digital curriculum, it's a matter of how fast."



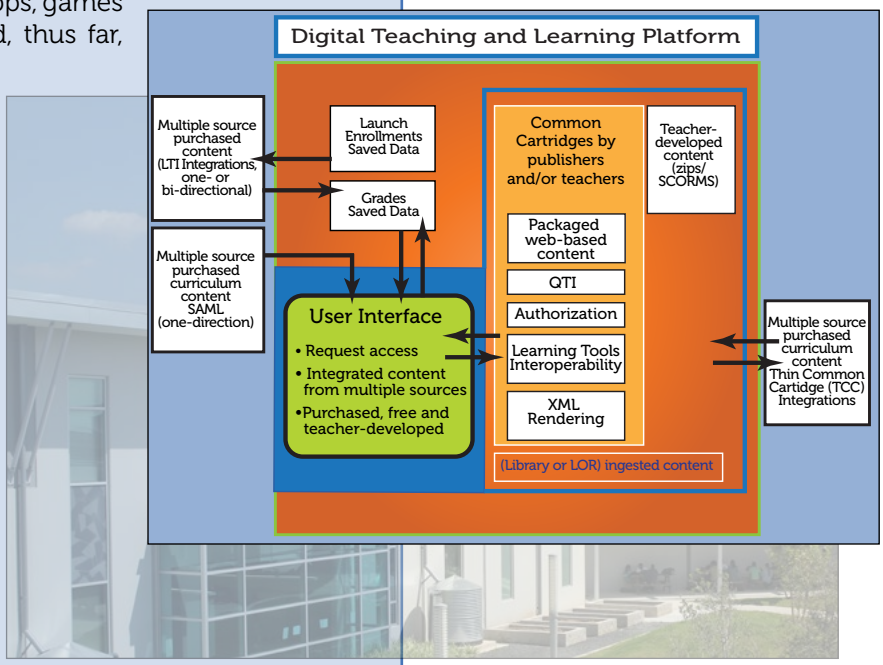
One-on-One Computing Initiative

The one-on-one computing initiative, (also called one-to-one or 1:1) has been sporadically implemented in the American educational system since the 1990s. However, with the broad availability of more and more inexpensive digital devices, this implementation is expanding rapidly. A good example is in Houston, Texas.

The Houston Independent School District launched its own initiative last year, called PowerUp, with the goal of distributing 65,000 digital devices—enough for every high school student and teacher in the district— across 282 schools, and to do this by the start of the 2015–16 school year. This set the demand for a fast-paced, focused transition strategy.

Digital Resources
Now Integrated Into the HISD LMS

Houston Independent School District is piloting a new IMS Global standard called "One Roster" –which is making their rostering more simple and manageable. The apps, games learning software they've integrated, thus far, as part of the architecture of their digital curriculum strategy, is listed below:



Bedford Freeman
AP Macro Econ
AP US History
AP World History
Discovery Education
- Earth and Space Science
- United Streaming

Istation (State-approved)
US History Since 1877
Knovation
McGraw Hill
- 6-8 Science: Texas Glencoe

iScience
- Physics
- Integrated Physics and Chemistry
- K-5 Spanish Reading: Tesoros

Pearson
- Algebra I
- AP Psychology
- Stats Modeling the World, 4th Ed
- Biology
- K-5 English Reading: Reading Street

Social Studies School Service
Wiley
AP Human Geography
ABC CLIO
CompuScholar
Computer Science I, II Teen Coder
Game Programming Teen Coder
Houghton Mifflin-Harcourt
- 2-5 English and Spanish Language Arts
- Environmental Systems
- K-5 English and Spanish Science: Fusion Science
- Chemistry

HMH/Holt McDougal - 6-8 Math:
- Texas Go Math

HMH Riverside (Iowa/Logramos/ CogAT)
Write Source/ Fuente de Escritura
Khan Academy
Globaloria
Learning A-Z
Language! Live
National Geographic Reach K-5 ESL
Zaner-Bloser:
- 1-3 Handwriting
- 1-5 Spelling

These digital resources have been integrated or ingested into the HUB and can be found by HISD teachers and administrators through searches by "key word" or by "TEKS (Texas Standards)" in The HUB (ItsLearning LMS) library.

Beatriz Arnillas is the Central Office Senior Manager of Instructional Technology in the Houston Independent School District. HISD has implemented a very aggressive conversion to digital curriculum. Here Ms. Arnillas explains some of the strategic decisions they made and how they overcame the challenges encountered.

For the complete interview with Beatriz Arnillas, visit learningcounsel.com

Implementing Digital Curriculum

Strategies from a Successful Program

High School District

214 now uses iPads in the classroom in a one-to-one program that's producing excellent results. Students keep their iPads with them 24-7 and install apps themselves, which contributes to the individualized learning experience and increased engagement with teachers and other students.

One of the biggest advantages is real-time feedback in the classroom. Students pull up an app or website to answer a question. The teacher can tell immediately if the majority of students got the answer wrong, which means they can go right back into the subject matter if more help is needed.

Organic Beginnings

When the school district began their transition to digital curriculum back in the 2009-2010 school year, they started with the teachers. At the time, digital curriculum publishers weren't keeping up with the demand for content, so the teachers in Bockwoldt's district began to create their own. Using resources like YouTube, Khan Academy, and CK-12, the teachers used iPads and iBook Author to craft their own content and curriculum. This content creation strategy quickly spread across the district, with professional learning communities springing up to share what they had created.

Bockwoldt saw push-back from some teachers in the beginning, ones who weren't interested in moving away from the traditional text book based curriculum. But, as they saw the increase in student involvement and achievement, these teachers wanted to see the same gains in their classrooms. The early adopters taught the later ones until everyone was on board. Many who have been teaching for decades are feeling reenergized because of the new way they're teaching.

Although they mostly used their own curriculum in the beginning, today the district has adopted a hybrid strategy. They use some ready-made digital curriculum, but they still rely on teachers to have the on-the-ground knowledge of what kind of content they need and what meets the standards for college and career readiness.

Spotlight: SAMR Model

The SAMR model for technology implementation in education was developed by Dr. Ruben Puentedura in 2010. The model provides a practical, step-by-step approach for those interested in transitioning to a digital curriculum.

The four components of the SAMR model are:

S — Substitution: This is the first step in the process, where technology acts as a direct substitution for earlier tools. There's no functional change.

A — Augmentation: In this step, the technology is still used as a direct tool substitute, but there's functional improvement from older tools.

M — Modification: Moving away from direct substitution, the technology now allows for task redesign.

R — Redefinition: When the last step is achieved, new tasks are now possible because of the technology that weren't conceivable before.

The Substitution and Augmentation steps are considered the Enhancement phase in the SAMR model. Schools sometimes spend quite a lot of time in this phase, but the real benefits are to be gained when you move into the Modification and Redefinition steps, or the Transformation phase. This is where there is significant student participation and collaboration. It's also where real functional change can be seen in the classroom.

"We're continually working with our teachers to help them evolve and transform their instruction in the classroom."

Student Involvement

Students, too, quickly warmed to the new technology. "When I meet with students and ask how they like using the iPad," Bockwoldt says, "they like using it for school a lot. It's a tool they may have had at home, but it's been very different for them to use it in a school environment for learning." In his experience, it takes about thirty days for both students and teachers to get used to using the devices. Once that happens, no one wants to go back to the old way of doing things.

A New Classroom Model

Unlike the old model of a teacher lecturing in front of a class, observers now see webs of students learning from each other and the teachers moving around the room, helping when needed and even learning from the students themselves. Kids are using the technology that they have at home and would be using anyway, so they're engaged and interested.

Developing a Strategy

High School District 214 started out with a pilot program consisting of the teachers who were most excited and interested in digital curriculum. They built upon the success of these early adopters by having them teach others. In addition, a network of professional development personnel, technology facilitators, and others was created to give teachers a place to go when they need assistance.

Bockwoldt and his team use the SAMR model of technology implementation in education. "It has been a key part of our strategy," he says. "We're continually working with our teachers to help them evolve and transform their instruction in the classroom."

Transitioning to Devices: Working out the Budget

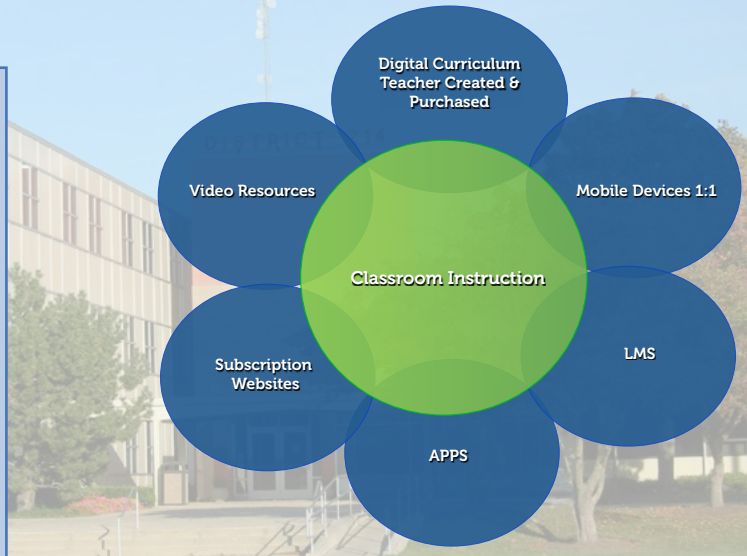
Bockwoldt advocates taking a strategic look at long-term budgets with a focus on alternative funding. His district reallocated funds from traditional desktop computer labs and software, as well as traditional textbooks. Because of this strategy, they haven't had to spend any new money or assign a fee to the program. "I think what has to happen in school districts is we need to be creative, to not do the same thing we've always done before," Bockwoldt says. "You can't sustain a desktop platform and laptops and carts as well as mobile devices these days. You have to see what that transition looks like and start planning for it."

One thing Bockwoldt cautions is to avoid focusing too much on budget where the devices are concerned. Input from teachers, students, and division heads should be the driving force behind the decision to purchase certain devices, not price. He suggests getting these people involved first to see what works best in the classroom, then working on the budget and finding the funds.

Final Advice

To districts considering the transition to digital curriculum, Bockwoldt advises to start with the teachers. Are they accepting of digital tools and excited about a new type of learning? If not, a plan needs to be created and implemented to get them ready. The transition doesn't happen overnight. It takes time to build capacity and get the teachers and the institution on board, but once it gets there, the program will grow organically, and the results will be well worth the time and effort.

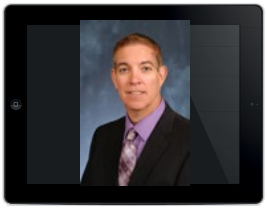
Digital Curriculum Graphic



Digital Learning Resources Being Successfully Utilized by Township High School District 214:

KahnAcademy
Wolfram Alpha
Subtext
A Little Calculus
Viernier Graphical Analysis
NearPod
Principles & Problems McGraw Hill -eBook (Physics)
Biology (National Edition by Kenneith R. Miller)
Pearson eBook
85 Temas Student Edition w/supersite - eBook (Ap Spanish)

Keith Bockwoldt is the Director of Technology Services at Township High School District 214 in Arlington Heights, Illinois. Bockwol designed the Education Technology Replacement and Initiative Program to define technology standards that align with the district's strategic goals. His efforts are spearheading a change that's having a significant impact on achievement for the 12,100 students in his district.



For the complete interview with Keith Bockholdt , visit learningcounsel.com

Vision for Innovation

Union County's Strategy for Digital Curriculum Implementation

Formulating the Initial Strategy

The discussions for a digital implementation strategy began back in 2009. They quickly moved to the importance of a central vision, the end result for the whole strategy. In order to formulate this vision, Dr. Jones gathered cabinet staff, board members, principals, and teachers together to form a planning committee.

By focusing on the end result, their strategy stayed flexible, which is a key part of their program's success. For example, those early discussions held devices as ancillary tools, with the primary material coming from textbooks. Over the course of the program, this has evolved. Today, devices paired with digital curriculum are the primary tools, yet the strategy stays true to the original vision of education.

The Importance of Planning

From the beginning, Dr. Jones built his strategy around digital implementation being a complete change, not just a passing fad. Even when they were just in the planning phase, he made sure to put in the time and effort to lay out a good strategy.

"If we're not careful, we become a profession of new starts," he said. "All along, we have been concerned that it would be looked at as just another new start—here's Union County trying something new. We took our time and made sure that we had priorities established."

A valuable tool for Dr. Jones in laying out this strategy was surveys. Union County has been using surveys as a valuable tool for years, sending them to parents, teachers, principals, and students. This data helped them gauge community support for the new developments.

"The survey process has been a part of our school system for several years," Dr. Jones said. "So we were able to use standing surveys. We also looked at some other voltage checks, such as conversations with parents."

Shifting the Strategy's Focus

Once the vision and goals were in place, it was time to lay out a detailed strategy for implementation, but they ran into a snag—no one in their state had done it before. Not one other school or school district had made enough advances enough to provide a clear methodology for implementation. So they looked outside the state to other counties and school programs to gather information. And they weren't afraid to let the data they found change their strategy.

> "It goes back again to what is your vision? What is your purpose? What is the end result, and what is is that we want our students to be able to do as a result?"

Learning from Implementation

An important takeaway from the Union County program is the patience and attention to detail they took during planning and implementation. They were

Union County's Digital Implementation Strategy

1. **Form a Planning Committee:**
   Isolate the vision for the program

2. **Consult with the Community:**
   Review local surveys and engage the community in open conversation.

3. **Gather Strategic Data:**
   Review successful actions of other districts and don't be afraid to go far afield.

4. **Refine Plan & Vision:**
   Using what was learned, adjust the vision and approach.

5. **Pilot Program:**
   Try out the plan in carefully selected situations to obtain real results.

6. **Selected Rollout:**
   Begin implementing digital strategy on a grade-by-grade basis.

7. **Rethink, Reskill, and Reorganize:**
   Always be ready to change the strategy, plan, or system to keep the program in line with the vision.

willing to invest years into testing and slowly rolling out the program to make sure that they got it right.

Their first step was a pilot program. They narrowed down their program to one class in a single middle school, and two classes (math and social studies) at a high school. To make sure that all students could be reached with their program, each of the schools they chose was from opposite ends of the economic spectrum.

After that successful pilot, they rolled out the program to all 6th grade classes, then 7th grade, then 8th grade. After that, they rolled out the program into high school, and today, after seven years, it's successfully implemented across the district from 6th grade through 12th grade.

A vital part of the strategy was learning and adjusting throughout the pilot process. For example, the 6th-8th grade rollouts used netbooks as the devices, while the high school students were given Chrome devices.

Throughout the whole process, Dr. Jones has followed the "Three R's"— Rethink, Reskill, and Reorganize. He plans to integrate those same principles into his strategy as they roll out the elementary program in the coming years.

Advice for Other Superintendents

Dr. Jones's advice for other superintendents? Remember your central vision. "It goes back again to what is your vision? What is your purpose? What is the end result, and what is it that we want our students to be able to do as a result?"

Dr. Jones particularly stresses finding the balance between taking risks and being too conservative. During his strategic planning, he knew that the changes they were making might cause problems or require drastic reorganization. To counter that, he always made sure they had safety nets, such as open discussion, careful review, action plans, and a systemic method of collecting data.

It's been a journey of seven years to implement a digital curriculum to the middle schools and high schools of the Union County school district, and there are more challenges ahead as they implement an elementary program. From Dr. Jones's experience, it's worth the effort and the careful planning. Today, teachers regularly tell him they can't imagine life without the curriculum, and many think that it might be the key to restoring the school system.

Dr. John Jones has spent over twenty-five years serving the school districts of Union County, North Carolina. He has held a variety of positions, including the Director of Middle School Education and a principal of five schools. He is currently the Assistant Superintendent of Instructional Programs for Union County.

For the complete interview with John Jones, visit learningcounsel.com

Creating a Digital Learning Environment

Using Technology Tools to Individualize the Learning Experience

Outlining the Goals

Ashlock's approach started with identifying the changes that would need to be made. One of the first things that she realized was that teachers in her district were having trouble meeting the individual needs of students. Their classes were big, and students had very different interests, skill sets, and background experiences. Digital learning solutions provided an answer to individualizing the learning process.

Once they had identified the need, Central Unified's strategy focused on these three basic elements:

1. How to effectively support student learning
2. How to build adult capacity so they could meet the needs of the students
3. How to create a culture that was focused on literacy and learning

Redefining Learning

One thing that helped was focusing on the transformation as a change to a whole digital learning environment, as opposed to only the implementation of a digital curriculum. The district focused on altering not just the textbooks and methods of receiving information, but also the kinds of questions the teacher asked and the desired end result for the students. Instead of just knowing that a historical event occurred, for example, students could explore the reasons why it occurred, what factors were involved, and any other examples of similar events.

Ashlock's goal is to find ways to generate thinkers and problem solvers. "No longer is it memorization of information or procedural ability to solve a problem," she says. "It's about, okay, now I have to get behind the wheel of that car, take all that knowledge that I have, and do something with it." She points out that the idea of America was based on the assumption of an intelligent, educated populace making decisions for the good of everyone. That's why it's so important to equip young people to make sense of things and determine what is true and accurate today.

She's excited that the new technology tools are helping close the experience gap for the students in her district. Having varied ways of diagnosing, prescribing, and testing what students learn means that it's much more possible to find learning methods that work best for each individual.

Focus on Teachers

A majority of the teachers in the district had been trained in methods that emphasized complying with rules and following procedure, which meant that many weren't comfortable with the outside-the-box thinking that digital learning requires. Because of this, professional development to build the adult capacity to do things differently was at the top of Ashlock's list.

"We firmly believe the teacher is an integral part of [the digital transformation] process," Ashlock says.

> "The teacher's ability to identify student need, strengths, and interests, to help guide them in how they approach things, is critical. "

"The teacher's ability to identify student need, strengths, and interests, to help guide them in how they approach things, is critical. We do have fully digital curriculum, but we really believe in the power of the teacher and that relationship between the teacher and the individual learner as a motivator and a way to meet the needs of that particular student."

Getting Started

To districts beginning the process, Ashlock offers this advice: take the time to spell out what you are trying to accomplish first. The goals and vision need to be identified before the best way to achieve those can be found. The clients of a school district are, of course, the children, so their needs should be first and foremost.

Ashlock is proud of the job her district is doing and thinks it will eventually lead to a new age for students in the classroom. She sums it up in a few words: "We're working towards equipping them to be adults who are thinking, meaning-making, and innovative in solving the problems that face our communities today."

Dr. Laurel Ashlock is the Chief Academic Officer/Assistant Superintendent of Educational Services for the Central Unified School District in Fresno, California. The district serves over 15,000 students, with two-thirds living in rural areas and 38% English learners. Since many of these students don't have access to the technology and resources they need at home, Dr. Ashlock began taking steps toward supporting them at school as soon as she arrived at Central Unified eight years ago.

For the complete interview with Laurel Ashlock, visit learningcounsel.com

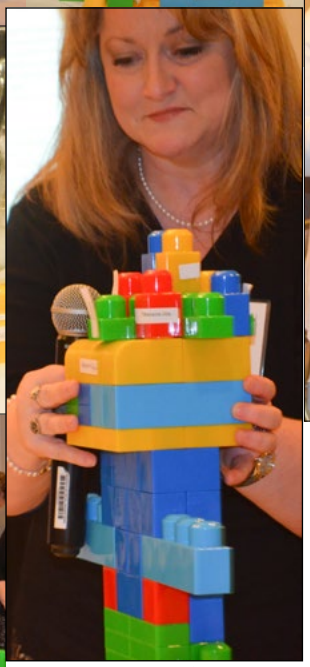
Model Architecture in Action

November 2014 National Gathering New Orleans, LA

Above: Mark McKinney, Accounts Manager, Bright Bytes/ LeiLani Cauthen: CEO, the Learning Counsel/ Mark Walls, Director of Instructional Solutions, Gwinnett County Schools, Georgia

Left: Dr. Mike Webb, Deputy Superintendent/ Dr. Mary Ellis, Superintendent, Union County Public Schools, North Carolina

Above: Tonia Smith, Project Director, Clarendon School District Two, South Carolina/ Cleon Franklin, Shelby Public Schools, Tennessee/ Dr. Richard Murphy, Technology Innovation Specialist,Alabama Learning Exchange, Alabama State Department of Education, Alabama



Above: Anne Boothe, Director, Academic Services and Personalized Learning, Houston Independent School District, Texas

Above: Jamey Hynds, Director, Business Intelligence, Katy School District, Texas

Education Executives at the Learning Counsel National Gathering in New Orleans build their strategic architecture for digital curriculum implementation in Mega Bloks. One and all got a three-dimensional look at what they were doing to transform their districts and schools. It was educational for the educators—opening eyes to workable strategy and renewed purpose. And some great bonding, too!

Houghton Mifflin Harcourt™

hmhco.com • 800.225.5425

HMH Enables Learning in a Changing Landscape

To learn more, contact your local Account Executive:
hmhco.force.com/replocator

Together, HMH and your district will enable learning through three interrelated sources of value:

Effective Content

HMH® continues to transform learning through our proven, interactive, adaptable, and portable content.

Custom Services

We are focused on understanding your needs and offer a variety of services that enable and accelerate your district's learning transformation.

Enabling Technology

Our technology solutions provide you an effective learning environment and foundation for interoperability, growth, accessibility, insight, and efficacy.

Connect with us:

@HMHCo