



## **Digital Curriculum: Instructional and Administrative Strategies**

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## A New Vision of Teaching and Learning

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Digital curriculum offers educators, parents, and our youth a new and promising opportunity to revamp our traditional model of teaching and learning. Online learning via digital curriculum provides enhanced effectiveness for teachers, differentiation and personalization of instructional programs, and a more engaging school life for students, whether they need remediation, acceleration, or an alternative school experience. Digital curriculum is a superb program for several instructional purposes, including original credit, credit recovery, unit recovery, dropout recovery, and Advanced Placement. As a result, educational outcomes will improve: Dropout rates will decline, graduation rates will increase, and student achievement will rise. The purpose of this paper is to provide a survey of instructional and administrative strategies to educators so they can make informed decisions about the various learning options available for digital curriculum and the opportunities for allocating and reallocating scarce educational resources.

Despite the dedicated work of teachers and administrators, the traditional model of teacher-led, whole class instruction has not worked for many students. School reformers have implemented numerous supplementary staff and support programs, such as reductions in class size, English-language learning, coaches, professional development, and counselors. While helpful, these programs focus on the refinement of our basic model of instruction, rather than on the expansion of alternative methods of curriculum development and delivery. In spite of school reforms such as standards, assessments, and research-based best instructional practices, we continue to underserve struggling students, and fail to provide new options for high-performing students and those needing alternative instructional programs.

Struggling high school students are often frustrated with the standard repeater classes and remedial programs. Some academically talented students may want to complete high school at an accelerated pace. There are other students who may have medical problems that require part-time attendance at school supplemented by work at home or at a health care facility. Finally, there are students who prefer a different learning environment because of social preferences or non-traditional learning styles.

At the same time, teachers become frustrated with the demands of whole group instruction. In the words of one expert, "with 25 students, often of different abilities, sometimes with cognitive or language limitations, and needing to master reading, writing, math, science, and social studies, the elementary teacher is easily overwhelmed. At the secondary level, where subject matter becomes far more sophisticated, teachers specialize in particular disciplines, but they meet multiple classes and take responsibility for 150 students at a time—with a wide range of skills and challenges" (Chubb, 2010, 5). These challenges posed by diverse learners are compounded by the financial crises facing state and local governments, where the trend in increasing public school funding has come to an abrupt end.

A few years ago, a prominent expert in school improvement, Mary Kennedy, reported the results of her research about the implementation of reform practices. These reform ideas have considerable merit, but the challenge is making them work in everyday practice.

Kennedy's research explains the reasons for such a gap between theory and practice in the traditional classroom. It starts with classroom circumstances that discourage standards-based teaching:

- Students come from widely different backgrounds and interests in academic content.
- Students occupy a small space, "are easily bored, physically active, and frequently restless."
- Many students are "novice thinkers who are likely to get off track and disrupt the direction of the lesson."
- Teachers experience constant disruptions and distractions.
- Teachers are often time-constrained in preparing and organizing their work.
- Teachers have difficulty managing complicated group learning activities; these activities are hard to coordinate and "often actually reduce attention to the lesson's most important ideas."

As a result, teachers often avoid differentiated instructional activities that can lead to classroom disruption and reduce higher-level content, and so they resort to teaching in more routine and less demanding and individualized ways. In short, these circumstances of teaching make it difficult for teachers to respond to diverse learning needs and implement best practices as required by state and local policies (Kennedy, 2006).

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## **The Digital Alternative**

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Fortunately, there is a solution to the challenges of traditional classroom instruction, low-achieving students, frustrated high achievers, the disturbing dropout rates, and the demand for alternative educational environments for an increasing number of our students. Online learning offers a comprehensive program of web-delivered courses for secondary schools.<sup>1</sup> Each course is available entirely online and presents a rigorous curriculum in an engaging way. In a typical digital high school course in language arts, for example, activities include readings, journals, labs, discussions, projects, and embedded assessments. The activities are delivered through text, images, audio, video, and animation, including interactive experiences (Sloan & Mackey, 2009, 12-13).

Since the curriculum is delivered online, the teacher/facilitator serves her students primarily as a coach, mentor, and one-on-one instructor for small groups and individualized assistance. She grades essays, but students receive immediate feedback on computer-scored quizzes, diagnostics, and assignments. Students must achieve a minimum score or higher on the computer-scored assessments to advance to the next lesson or module. The mastery learning approach assures that students learn continuously throughout instruction.

The teacher can monitor progress and access test scores at any time so that she can understand each student's learning needs. Students are able to work independently at their own pace, permitting the teacher to concentrate on providing help to struggling students as well as guiding accelerating students (Sloan & Mackey, 2009, 12-13).

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<sup>1</sup> The terms "digital curriculum" and "online learning" will be used interchangeably in this paper.

Although there are numerous suggestions for differentiating instruction in the traditional classroom, few teachers are able to apply these practices in a sustained way. Online learning offers a more realistic solution to the educational challenges of today's students than the limiting conditions typical of traditional instruction. Online learning specifically provides the following advantages:

- An online program provides a curriculum for each course at different levels of difficulty to accommodate students with varying needs (Sloan & Mackey, 2009, ii).
- Students can progress through the online program at their own pace in a cycle of learning followed by assessment and review that permits true individualization.
- The frequent assessments provided by the online program enable students to receive regular feedback that fosters engagement and motivation.
- Differentiated, self-paced instruction delivered online creates opportunities for learning that can occur at convenient times and locations. While time and place are flexible, learning outcomes are primary.
- Students develop more responsibility for and control of their learning when they have more choices regarding the pace, time, and location of online instruction.
- Learning becomes more personalized as teachers take advantage of online alternatives to whole group instruction and avoid the frustrations of the circumstances of teaching described earlier. Instead, teachers are able to provide one-on-one or small group instruction. At the same time, students are less distracted by the social dynamics of the traditional classroom.
- Teachers no longer have the responsibility for developing the curriculum or delivering whole group instruction and can focus on more effective roles as coaches, tutors, facilitators, and interventionists.
- An online program can operate in a variety of learning settings within school and in other locations that are attractive to students who want an alternative educational approach.

A few years ago in Wichita, Kansas, public school educators were searching for ways to prevent teens from dropping out of high school. At the time this effort started, there were few opportunities for students to recover failed courses other than the traditional summer school program that often conflicted with student work schedules. District staff members surveyed a sample of dropouts and concluded that many had the potential to graduate but were thwarted by issues such as "frequent absences or suspensions, boredom with traditional learning, unplanned pregnancy, stressful work and family responsibilities, alienation, feeling unsafe in school, and/or a devaluation of education at home." In response, the school system set up credit-recovery centers with a computer-based curriculum within Wichita high schools (Mackey, 2010, 4).

Each credit recovery center consisted of computer labs that were open after regular school hours and designed for students who needed to retake courses they had failed. Two of the high schools' regular teachers, who were paid on an hourly basis for the extended day, managed the labs (Mackey, 2010, 7). In 2008, the district determined that the Apex Learning® digital curriculum would give students the opportunity to complete courses at

their convenience. District administrators and teachers were impressed with the self-pacing features of the digital curriculum that would benefit students along the entire learning spectrum, from those who learned quickly to those who struggled. Wichita educators were also impressed with the wide range of courses and course levels offered by Apex Learning (Mackey, 2010, ii-iii). A bright spot amidst a bleak outlook, this district's story illustrates the power of digital learning. It's time to expand the old model of teacher-led instruction with the emerging online learning that fundamentally changes our current instructional practices (Chubb, 2010, 6).

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## **Modes of Delivery**

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The International Association for K-12 Online Learning provides a framework for analyzing online learning. Online programs and school settings can be represented by a continuum on which pure online or distance education is situated at one end and traditional instruction in a brick-and-mortar classroom is located at the other end. In the middle are blended programs, which represent a combination of online learning and facilitation by staff members at the school and other locations (Watson, 2008, 6). This section of the paper will provide an analysis of distance and blended digital instruction and the conditions and practices that usually accompany each, allowing educators to make sound decisions about the optimum online solution.

## **The Distance Solution**

Distance education or virtual online instruction occurs when teachers and students are remote from one another. Distance education is usually appropriate under two circumstances. In the first case, the program is effective when either too few students need a particular course or qualified teachers are not available for a course. Advanced Placement courses in rural areas are a good example of this circumstance. Teachers who supervise the online courses are provided locally if available, or are employed by the online provider. Sometimes the teachers supplied by the online provider are assisted by local teachers who serve as mentors and help the online teachers in coordinating the program. Students are often assigned to a learning lab for one period to access the online courses or they conduct their work outside of school.

A case in point: "Determined to provide access to AP courses for all students in the state, the University of Iowa's Belin-Blank Center used a technology grant to establish the Iowa Online Advanced Placement Academy (IOAPA) in 2001. Through IOAPA, small, rural schools that would otherwise not be able to offer AP classes are able to take advantage of distance learning to provide their students with access to AP courses" ("Single Digital Curriculum," 2010).

The Anchorage School District in Alaska, providing another example, strives to serve the needs of all of its students, but offering the right opportunity for every student is a challenge. "The advent of online learning opened a world of possibilities, and Anchorage jumped at the opportunity to implement new distance learning programs. While Anchorage continues to use certified Apex Learning online teachers for most of its AP courses, it is starting to take advantage of district AP teaching resources by aggregating students from up to seven high schools into an online classroom staffed by a teacher from one of the participating high schools" ("Single Digital Curriculum," 2010).

In the Vacaville School District, in California, Buckingham Charter Magnet School is a small college preparatory academy that has used the Apex Learning digital curriculum extensively. "The charter school's student population is too small to support the staffing required to offer AP courses as a traditional brick-and-mortar program. Nevertheless, demand exists among students for AP classes in math, English, science, foreign language, history, government, and psychology. Between 2001 and 2008, Apex Learning has provided 172 students at Buckingham Charter School with 284 AP courses that otherwise would not have been available. Buckingham is a magnet school that emphasizes technology, so its students have been drawn to taking AP courses in an online environment. Students attend AP courses in a computer lab during the regular school day and are required to log nine hours of class time every two weeks. Subject-area teachers supervise the AP classes and serve as mentors, helping students as needed and working with Apex Learning online instructors to facilitate student progress" ("Smaller Charter School," 2010). The results are impressive. All AP students graduated, and 84% went on to either two- or four-year colleges.

The second opportunity for the distance solution occurs when students are underserved in the traditional high school program. Academically talented students may prefer to pursue an independent study program and attend college early. Students who are homebound or who are coping with a medical disability can also benefit from the flexibility of distance learning. Finally, there are students who prefer a non-traditional school environment because of unique social or learning preferences. In these cases, students can take advantage of the distance option and benefit from a rigorous, differentiated digital curriculum.

The distance learning option is a relatively low-risk strategy since comparable courses have not been available for non-traditional learners or students who wish to take AP and other elective courses not usually offered in small or rural schools. The program has minimal impact on the school's current curriculum, and teachers are not faced with large-scale organizational change.

### **The Blended Solution**

In the blended model, online programs offer a variety of applications that combine on-site support and online curriculum. Students can use the online curriculum in school or elsewhere for original course credit, the recovery of failed courses, the recovery of quarter or course units, and dropout recovery. The online programs are also used to supplement regular classroom instruction. The blended approach is critical because it provides students with personal contact and support.

Credit and dropout recovery programs using an online curriculum are dramatically different from the typical "repeater" classes associated with worksheets, repetition, and teachers who are frustrated by "their students' boredom, lack of interest in school, and inability to make the connection between learning and success in life." As teachers and administrators are under increasing pressure to raise graduation rates, the traditional solutions to remediation have gained a reputation for low quality and for lowering standards so that students can pass.

Some of the earlier online products were the worst offenders. They were low-cost and "had very low levels of teacher involvement and required very little of students. They were used

primarily because they were inexpensive, and they allowed students to pass, whether they have learned anything or not” (Watson & Gemin, 2008, 15-16).

The Apex Learning digital curriculum has little in common with these earlier online programs. Provided are the diagnostic assessment tools and instructional support needed for differentiated instruction. These tools create an individualized study plan that enables students to master each learning module and to move on “to the parts of the course they need to focus on.” The self-paced feature of an online learning program is “particularly valuable for at-risk students who may associate education with difficulties and stress, compounded by learning deadlines imposed by arbitrary calendars or school hours” (Watson & Gemin, 2008, 15-16).

The blended online program utilizing the Apex Learning digital curriculum in the Dorchester School District Two in South Carolina represents one of the most comprehensive examples of the blended approach and offers a series of cascading interventions designed to identify students at the point of failure and apply corrective measures. The Apex Learning digital curriculum provides for differentiated, self-paced learning that can occur in a variety of settings within and outside school. The following components were initiated during the 2008–2009 school year at the three Dorchester high schools (Flora, Allen, Arnett, & Purvis, 2009):

- Unit Recovery is for students failing a single quarter of one or more classes. Learning can occur before and after school, during lunch, or in a credit recovery lab where students work in the Apex Learning digital curriculum. The classroom teacher manages the curriculum. Students are evaluated through proctored tests and earn a grade of 70 for successfully completing unit work.
- Independent Whole Credit Recovery is for students who failed one class in the past year. The goal is to return these students to a four-year graduation path. The work is usually completed outside the scheduled school day.
- In-School Whole Credit Recovery is for students who failed more than one class in the past year. This provides the framework for the return to a four-year graduation track. Students are hard scheduled every day in a credit recovery lab with a certified teacher and are assessed at 70% mastery requirements for completion. Students with early completion are given the opportunity to continue in the lab to recover additional classes and/or take an online course for original credit that is taught by a certified teacher
- Summer School Credit Recovery is for students who fail one or more classes during the previous school year. Students are hard scheduled with a recovery teacher. The program replaces or supplements traditional summer school or extended-year options.
- Evening School Program is for students whose situation may preclude normal enrollment in school. This program uses Apex Learning digital curriculum, rather than traditional instruction, for credit recovery and original credit.

- Curriculum-Based In-School Suspension provides teacher-assigned lessons from the Apex Learning digital curriculum, or the student can work on any content recovery currently in progress. Students are assigned to specialized, computer-enabled ISS labs.
- Homebound and Home-Based Education is delivered through Apex Learning digital curriculum and administered by highly qualified teachers within each available subject area. Students no longer wait for instruction to be delivered. They work prescriptively and move ahead at their own pace.

The use of blended online learning for credit recovery and original credit is accelerating in alternative schools. In Volusia County, Florida, the district has several alternative schools such as transition schools, storefront dropout prevention and recovery centers, and Department of Juvenile Justice sites. These programs employ Apex Learning digital curriculum for original credit ("Programs for At-Risk," 2010).

In Wichita, in addition to the school-based recovery centers, the school district has established dropout recovery centers where students can attend a location removed from the traditional high school. The centers are equipped with individual study stations with computers, "as well as video and audio players with headsets, tables for group study and project work, a sitting area for reading, one-on-one interaction with teachers, student discussions, and peer counseling, and a resource center for instructional materials and career information" (Mackey, 2010, 5-7). These sites are affiliated with adjacent high schools ensuring that students are required to meet the same graduation requirements and earn the same high school diploma as traditional students.

Online programs are also used by many districts as supplemental instruction. For example, students in Cherokee County, Georgia, who need support for an integrated math curriculum are assigned a second period of math using the Apex Learning digital curriculum. Also, the district employs specific instructional modules from the Apex Learning digital curriculum for recovery during lunch periods or after school for targeted interventions ("Students Back," 2010).

In other schools, both online learning and teacher-delivered instruction occur in a traditional classroom setting. Often the teacher uses lessons from the digital curriculum to supplement traditional instruction; conversely, in schools where the digital curriculum is the primary mode of instruction, the teacher delivers content and designs learning activities that supplement the digital curriculum.

This system of technology integration in the traditional classroom has significant inherent advantages, including the following (Moe & Chubb, 2009, 84-86):

- Technology provides an engaging experience, including interactive, multimedia presentations.
- The work assigned exactly meets student needs.
- Students are not frustrated or bored by work that is either too difficult or too easy.
- When the instruction is so customized, students are engaged and motivated.

- Because of the targeted nature of the instruction and the highly motivating technology, students develop a sense of accomplishment while behavior and discipline issues subside.
- The teacher is available for timely group intervention.

In the Cincinnati Virtual High School, the Apex Learning digital curriculum is the basic mode of instruction, but teachers work in classroom labs with the students to supplement the online program. Computer labs are dedicated to each of five core subject areas—social studies, math, language arts, science, and foreign languages. Two certified teachers staff each lab. In addition, there is a separate lab for special education students staffed by two intervention specialists, as well as a reading specialist who serves the entire program. Two social workers, a guidance counselor, a tech support person, and a security officer also support the program. Students are assigned to the labs in two groups, one in the morning and one in the afternoon. Students also work outside of schools wherever the Internet is available (Watson, 2008, 7).

Another example is VOISE Academy, a charter high school in Chicago, where social studies teacher Patrick Staley supplements Apex Learning digital curriculum with lectures that provide background information to reinforce the online lessons. “He also uses an interactive white board to introduce key concepts before they begin the online lesson. Staley also enhances the Apex Learning digital curriculum with projects of his own design. For example, after students have finished a lesson on ancient Greece, he might have them work in small groups to create their own imaginary city-state using Google Sketch-Up, a 3D modeling program. Other projects might help students learn to design projects online, make Microsoft PowerPoint presentations, and design web pages” (Sloan & Mackey, 2009, 13-14).

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### **How Would Digital Curriculum Affect Your District?**

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This question can be addressed by posing several other questions that will enable districts and schools to identify what to consider when exploring online learning:

- What does research have to say about the results of online learning?
- What is the impact of online learning on student motivation and engagement?
- What particular support services are needed for at-risk students in an online environment?
- How does online learning affect teacher work life?
- How can the online curriculum change process be managed?
- How does organizational support affect the success of online learning?
- What are the cost-saving opportunities for online learning?

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### **The Research Dimension**

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In 2009, the U.S. Department of Education conducted a meta-analysis of research on online learning. An unexpected conclusion from this analysis was that there were a limited number

of rigorous studies contrasting online and traditional learning for K–12 students. Despite this limitation, the meta-analysis found that students engaged in online learning performed better than students who received traditional instruction, a result that is consistent with considerable anecdotal evidence from teachers and administrators. Moreover, the differences in outcomes between the traditional classroom and online were even greater when the online students participated in blended instruction.

The report also emphasizes that in addition to learning outcomes, online education has become popular because it provides “more access to content and instruction any time and any place.” These advantages include “increasing the availability of learning experiences for learners who cannot or choose not to attend traditional face-to-face offerings; assembling or disseminating instructional content more cost-efficiently; enabling instructors to handle more students while maintaining learning outcome quality that is equivalent to that of comparable face-to-face instruction” (Means, Toyama, Murphy, Bakia, & Jones, 2009, 1).

### **The Motivation Factor**

Carol Downing, Credit Retrieval Specialist in Volusia County, Florida, has a unique perspective on student motivation and engagement. “Online is a different model of teaching,” explains Downing. “The teacher not only works with the academic aspect of the student, but with the student as a whole. Students need to be in charge of their own progress . . . when they have this epiphany, there’s no stopping them . . . Our lesson learned is that the power to succeed doesn’t reside with the teacher. It lies with the student. Our job is to empower the student to be successful” (Watson & Gemin, 2008, 14).

According to teachers in the Dorchester School District Two in South Carolina, students in the credit recovery lab, working independently and at their own pace, avoid the stigma of repeater classes and the typical interpersonal conflicts that occur in the regular classroom. Diagnostic testing that allows students to demonstrate mastery of the elements they have already encountered in their previous attempt to pass the course, and to progress to parts of the course they need to master, keeps students engaged. “The relative autonomy of online instruction also gives students a sense of control. This control is validated by greater differentiation in lessons and continuous feedback that the digital curriculum provides—students cannot move ahead unless a fixed level of mastery has been achieved. Many students get a boost from the exhilaration of success. This contrasts with traditional teaching where learning is more standardized and assessed at longer intervals. In short, students have a much more positive experience with school life and are more likely to return to the regular program and graduate” (Flora et al., 2009, 10).

### **Digital Curriculum and Students at Risk**

Researchers and practitioners agree that online learning has many inherent advantages for students who are at risk. These benefits have been described in the previous section of this report on student motivation and online learning. At the same time, educators agree that teachers and facilitators in online environments must exercise more intense supervision of the learning process with at-risk students. This suggests that the blended approach to online learning is more appropriate for at-risk students than distance education. There is a definite need to develop specific programs within an online learning environment that cater

to non-traditional and at-risk students. Experts in online learning have recommended the following practices (Barbour, Archambault, Diamond, & Cavanaugh, 2010):

Identification of at-risk students:

- Ensure proactive and positive communication between teachers, students, and parents.
- Identify at-risk students as early as possible so they can receive the support they need.
- Decrease absence, truancy, and other behavioral issues by identifying the causes of these issues and develop action plans to correct them.
- Develop a response-to-intervention program and a life skills program to meet the behavioral and emotional needs of students.

Instructional strategies for at-risk students:

- Use an online curriculum to develop differentiated scaffolds for each student, monitored by a teacher/mentor and supported by an orientation to time management and task prioritizing.
- Teachers and facilitators should use one-on-one and small group direct instruction to remediate deficiencies that are not resolved during the online experience.
- Ensure that teachers take advantage of the flexibility that digital curriculum provides to expand learning time for students to master complex content.
- Use a collaborative team effort to regularly check on students' progress.
- Deploy specialists in at-risk student transition, special education, and online learning to develop an online professional development course for teachers who have at-risk and special education students in their courses.

These practices suggest the importance of active management of online programs. It is not enough to turn students loose to contend with the program on their own. Especially with at-risk students, it is critical that all staff members work as a team and carefully monitor and support student performance.

### **A New Teacher Work Life**

In the Dorchester Two district, many educators were skeptical about the value of online learning when the Apex Learning digital curriculum was implemented in the fall of 2008. They typically expressed two major concerns. The first surrounds the quality and rigor of online instructional programs. As teachers have become more familiar with the Apex Learning digital curriculum, this worry has dissipated. In many regular classrooms, as well as in credit recovery labs, teachers who integrated online lessons into the curriculum discovered that the Apex Learning digital curriculum is often more rigorous than traditional classroom instruction.

Another objection in Dorchester was more a matter of educational philosophy. Some teachers felt that giving students several opportunities to complete course requirements was unfair to other students who fulfilled their responsibilities the first time. They worried that it conveyed the wrong message about effort and consequences in life. This concern is evident in the fact that a grade for unit recovery can be no higher than 70%.

In the case of unit or quarter recovery in Dorchester, teacher use of the Apex Learning digital curriculum remains voluntary, but there are incentives for teacher involvement. Teachers are required to provide an intervention in the event that a student is in danger of failing. Unit recovery using the Apex Learning digital curriculum, which is often more efficient than teacher-designed alternatives, represents a logical and time-saving option for the busy educator.

Teachers throughout the United States are beginning to realize that online learning creates a more productive and satisfying work life for educators. As classroom teachers are challenged by the need to differentiate, incorporate state standards, maintain discipline, and motivate students who are increasingly disengaged from the routines of traditional whole class instruction, online learning provides the “heavy lifting” of course design, development, and delivery of instruction and assessment (Chubb, 2010, 14).

As a result, in online environments teachers become facilitators, tutors, diagnosticians, and motivators. “One English teacher who is assigned the recovery lab for two periods feels that she adds more value in monitoring student progress and managing the online program than in carrying out her traditional classroom role. Teachers also report that in an online environment they know more about each student’s learning needs. All teachers agree that the online program itself is not an instructional management system—that task remains with the teacher. It is likely that the online role will become more appealing to teachers to the point where they may begin to request and even demand opportunities to teach in the online world” (Flora et al., 2009, 10).

### **The Change Process**

In adopting an innovation as significant as digital learning, most school districts assemble a committee composed of representatives of the major stakeholders to consider online learning in general and to evaluate the various digital curriculum providers. In Volusia County, the adoption committee used a rubric to evaluate providers. The criteria included instructional design, course content, engagement, interactivity, assessment, resources, service, support, and technical requirements (“Programs for At-Risk,” 2010).

Successful adoption and implementation of online programs requires district support at the levels of teacher leadership, building administration, and top management. In the Dorchester School District Two, a lead teacher emerged who became the primary champion of and program coordinator for the use of the Apex Learning digital curriculum. The support of this person by the superintendent and his staff signaled the importance of bottom-up leadership that would prove to be so effective in influencing other teachers to embrace the digital curriculum.

The Dorchester experience also suggests the need for an alternative management system to complement the regular administrative hierarchy so that the online program receives

top priority. A multidisciplinary team led by the Assistant Superintendent of Curriculum and Instruction meets each week to review progress, solve problems, and move the program forward. The coordinator overseeing the use of the Apex Learning digital curriculum and the site-based instructional technology specialists follow up with teachers and school-based administrators. The assistant superintendent keeps the superintendent informed as needed—usually every week.

“This management process allows crucial decisions to move up and down the administrative chain of command with minimal friction. Because the assistant superintendent mandated that students and highly qualified teachers be hard scheduled in the credit-recovery lab, decisions can be implemented quickly. Research shows that many promising educational innovations featuring ambitious, pre-determined outcomes conceived by those at the top of the district can get mired in bureaucratic conflicts. Instead, the Dorchester program improves and expands through a series of practical, incremental decisions driven by the effectiveness of the instructional approach, an efficient management process, and committed people in the schools and at the district office” (Flora et al., 2009, 9).

### **Systematic Support**

School districts using digital learning need to provide a strong support network for teachers and administrators managing the program. The following issues are critical:

- School policies and procedures designed for the traditional course schedule, where time is constant and learning is variable, will need to be modified. With the Apex Learning digital curriculum, where time is variable and learning is self-paced depending on assessed achievement, course schedules and locations must be flexibly designed. “For example, a student could begin credit recovery after the start of the semester in order to complete his work just prior to the end-of-course test. Such an exception would not be permitted in the traditional classroom” (Flora et al., 2009, 9).
- Managing a large number of students pursuing credit or unit recovery can be a significant challenge. Students assigned to a credit recovery lab can be supervised by the lab teacher, but many students who work independently in several locations or outside of school hours can easily fall through the cracks. Tools within the digital curriculum, including the instructional management and reporting features of Apex Learning, provide valuable progress information for staff.
- Successful online learning requires close collaboration between instructional leaders in the district and technology specialists. In too many instances, technology drives teaching and learning. Successful districts avoid this distortion by ensuring that educational concerns are continually communicated to key decision-makers in the district. Unforeseen conflicts can arise, such as the strain on a district’s Internet bandwidth due to operating web-based programs.

### **Cost-Saving Opportunities**

Districts considering the adoption of digital curriculum have many opportunities for cost reduction through increased teacher effectiveness and improved student outcomes.

Although the relationship between online costs and traditional educational expenditures hasn't been formally studied, there are numerous anecdotal accounts of higher graduation rates and increases in credit recovery, providing early indications that efficiencies can be expected through the use of online learning. Here are some intriguing possibilities for cost-effectiveness:

- Summer school and evening school programs can be reduced or possibly eliminated, as credit recovery can be achieved during the regular school year.
- Effective unit recovery will reduce course failures and the need for credit recovery.
- Students who pursue successful credit recovery and original credit in the same semester or school year in a single class period accomplish double course productivity.
- Successful dropout-recovery and credit-recovery programs may pay for themselves or defray costs by earning state aid dollars tied to those students.
- Advanced Placement distance education, requiring less supervision, may be cost-effective because the cost of a teacher and curriculum supplied by Apex Learning may be less expensive than that of a district-provided teacher.
- Typical computer labs used for credit recovery can be more productive if they employ programs that permit lab teachers to monitor the computer screens of online learners, ensuring that students are on-task and being provided assistance (Moe & Chubb, 2009, 79).

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## **Conclusion**

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Although cost savings are certainly possible with online learning, the transformation of teaching and instruction that results in increased student learning and graduation rates is primary in the minds of educators considering the online alternative. As Costa and Kallick say, "All kids do learn but not on the same day and not in the same way. Effective learning requires quality curriculum and quality instruction designed to meet students where they are" (Costa & Kallick, Eds., 2008, 13). Toward this end, digital curriculum offers teachers the ability to provide alternative learning opportunities for students. Teachers and school administrators can grasp a new vision of teaching and learning where technology facilitates a variety of learning options in different learning environments. In addition, students and teachers leveraging digital curriculum will experience more satisfying and successful school lives. Students can embrace schoolwork as a liberating experience in which they have control over the pace of instruction and can respond to continual feedback that fosters learning. Teachers can use technology that provides a differentiated curriculum developed by experts and delivered in a way that individualizes instruction.

Released from the confines of the traditional classroom role, teachers are empowered to hone their expertise as mentors, problem solvers, and facilitators who are able to get to know their students well and personalize the learning process. With the adoption of programs supported by digital curriculum, students will achieve greater learning outcomes, graduation rates will improve, and educators will meet the needs of a wide range of students.

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