MAKING BLENDED WORK

SCHOOL DISTRICT CHIEF ACADEMIC **OFFICERS SOUND OFF ON BEST PRACTICES** FOR BLENDED LEARNING



This paper is the result of multiple in-person and virtual meetings of the Center for Digital Education's inaugural K-12 Chief Academic Officers (CAO) Working Group. The CAO working group program was designed to help curriculum leaders plan for the inclusion and implementation of digital learning methodologies and environments. Each year, CDE will select CAOs who have been recognized as early adopters of technology to participate as members of the working group.

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INTRODUCTION

B lended learning is on track to become the new normal in education. The approach combines the best of in-person and online learning, offering students the information they need in the method they need to receive it. According to a recent report from Arizona State University's Mary Lou Fulton Teachers College, "blended learning significantly outperforms face-to-face classroom instruction."¹

The New Media Consortium's 2015 Horizon Reports for K-12 and higher education indicate blended learning is increasing at education institutions of all levels. And a February 2015 publication funded by the Bill & Melinda Gates Foundation reviewed 20 studies on blended learning in higher education and reported that it produced higher academic achievement than courses that were exclusively face to face or online.

The Center for Digital Education (CDE) called upon leading chief academic officers (CAOs) from across the country to weigh in on the state of blended learning today, as well as the challenges and opportunities presented by this approach. They determined that to create a successful blended environment, districts must transform three areas of their schools: 1) school design, 2) teaching and learning, and 3) communication methods. This paper captures those conversations and presents actionable suggestions for districts to follow on their own paths to blended learning.

WHAT IS BLENDED LEARNING?

One issue with blended learning is defining it. Yes, a framework for blended learning exists from the Christensen Institute, and iNACOL has provided a definition, but in real-world practice, what districts deem as "blended learning" varies. Much like the notion of "green" with sustainability products, the concept might mean one thing to one district and something completely different to another.

According to the Christensen Institute, blended learning involves leveraging the internet to afford each student a more personalized learning experience, including increased student control over the time, place, path and pace of learning. Blended is a formal education program in which students learn through a combination of:

- Online curriculum and instruction
- Face-to-face instruction at a supervised, brick-and-mortar location away from home
- Connected modalities within a course or subject, resulting in an integrated learning experience

For the purposes of this paper, blended learning is defined as online and offline curriculum combined with face-to-face and virtual instruction in a learning environment that transcends traditional boundaries.



TRANSFORMING THE DESIGN OF SCHOOLS

he effort to support blended learning must incorporate all aspects of the school environment. For example, if the chief information officer (CIO), chief technology officer (CTO) and CAO work together to implement a digital curriculum, they will need to consider issues like data collection, storage and student privacy needs. And when planning the bell schedule, decision-makers should keep in mind that a blended learning environment offers the ability to extend the day beyond traditional school hours. Further, teachers may need to take different approaches to instruction based on the curriculum format — digital learning should not be approached in the same way as face-to-face instruction. Lastly, the physical learning environment should be transformed. In most districts, this means incorporating technology into every classroom, conceptualizing spaces for new kinds of learning and investing in equipment that maximizes flexibility.

To successfully engineer this transformation, the district CIO, CTO and CAO must work together to support the strategy from the beginning. The focus always should be on pedagogy models rather than tools or resources to support the pedagogy.

REDESIGNING LEARNING SPACES

The design of the physical environment must be modified to accommodate blended learning activities. Reconfigurable classrooms with tables and chairs on wheels are more amenable to active learning, and research indicates students who learn in these environments outperform students who learn in traditional arrangements.² Flexible furniture, such as desks that can be easily maneuvered to support individual or group work, with no true front of the classroom, can promote critical thinking, FLEXIBLE FURNITURE, SUCH AS DESKS THAT CAN BE EASILY MANEUVERED TO SUPPORT INDIVIDUAL OR GROUP WORK, WITH NO TRUE FRONT OF THE CLASSROOM, CAN PROMOTE CRITICAL THINKING, CREATIVITY AND INNOVATION.

creativity and innovation. Redesigning one classroom at a time within the school or developing an opt-in grade level strategy can scale this concept over time. Regardless of the rollout, changing the mindset of teachers to work in these collaborative and flexible environments must take place prior to these types of implementations; teachers need to look, touch and experience the new classroom before adopting it.

At Lawrence Public Schools in Kansas, for example, Dr. Angelique Nedved, assistant superintendent of teaching and learning, reports replacing traditional desks in select classrooms with round tables to facilitate student discussion and collaboration. Nedved says the school also painted over beige classroom walls with vibrant reds, greens and blues to inspire students. The result of both



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efforts has been increased engagement — not only among students but also with teachers.

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At Miami-Dade County Public Schools, officials took a similar approach, only from the ground up. According to CAO Marie Izquierdo, in 2011 the district converted an old office building into a blended learning space in downtown Miami, rebranding it as an iPrep Academy. Existing students with a 2.5 GPA or better can transfer to iPrep. Since its inception, 12 other iPrep Academy learning spaces have been established across the district. Today the academies comprise open spaces in which students take courses in different subjects simultaneously, learn independently online and collaborate with each other using technology in real-life situations. The schools have no bells. The days are fluid. And most important, students call the shots on how they want to learn.

"If you walked into one of these spaces, you really couldn't tell what class a student was enrolled in at that particular moment," says Izquierdo. "Students have a lot of freedom in terms of coming and going. If they are hungry, they get up and go to the kitchen. If they want to study, they study. It's completely different from anything most of these students have ever been exposed to - and they love it."

CAOs are careful to note that as districts redesign classrooms, there should be enough variety for students to choose the way they want to work. Every student is different, and each classroom needs to adapt to the needs of the students and the ways in which they interact with digital content and each other.

This is precisely the concept leaders at San Diego Unified School District in California have tried to capture. Instead of re-engineering entire buildings, the school developed Innovation Centers that allow students from brick-and-mortar schools to supplement their education. Students who use these centers can engage in online learning all day, part of the day or just for one period. They also can enter into satellite programs to make up lost credits, prepare for adult education programs or take college courses. Cheryl Hibbeln, the district's executive director of secondary schools, says not only does this system constitute blended learning, but it also represents a point-of-need service.

"What we're saying is that if you're a square peg and don't fit into a round hole, we've got the square hole for you right here," she

MASTERING RESOURCE SELECTION

Deciding which resources to invest in during a transformation of this nature can be challenging. Depending on the state, a percentage of digital content may be required or recommended. In Florida, for example, 50 percent of adopted content must be digital. Independent of state regulations, best practices generally have committees of teachers and experts in the field reviewing materials and making recommendations.

It might seem like common sense, but diversity of options across the district allows for choice, and district officials must conduct internal research to evaluate performance of each option and abandon initiatives no longer yielding results. At the same time, standardizing on certain content software may be useful for large districts, especially when doing so can help them negotiate contracts with favorable pricing.

On a more basic level, another option for guiding resource selection can be simply asking students and teachers for their opinions. In Miami-Dade, district officials assumed students would want Apple technology in all iPrep Academies, but when they asked, students resoundingly said they wanted the facilities to be device agnostic.

Requesting student input also changed the strategy at Lawrence Public Schools. Before the district invested in new furniture for its classroom spaces, officials asked teachers what they wanted. Not surprisingly, instructors described environments similar to their teachers' lounge - tables instead of desks, as well as couches and other features to encourage spontaneous conversation and interaction. Next. district officials asked students what they wanted. They, too, called for more seating (and, in some cases, standing) options. Interestingly, students also overwhelmingly said they liked accessing information on their smartphones.

"We figured somewhere around 50 percent of students would tell us they preferred smartphones, but instead it was 92 percent," Nedved says. "Informed with this survey information, we can make smarter decisions about how we spend our resources and where we focus our supports."

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TRANSFORMING TEACHING AND LEARNING

nce a district executes a new approach to school design, the next step in creating a successful blended learning environment is rethinking how to transition from traditional curriculum materials to digital curriculum materials. Even with the best technology, the onus is on educators to come up with a lesson that incorporates it and facilitates an environment in which students can actually learn.

There are a number of ways to accomplish this objective; some simply feature technology, while others have technology at the heart of a fundamental shift in pedagogy. Dr. Jason Van Heukelum, superintendent at Winchester Public Schools in Virginia, says that while both benefit students, the former is traditional learning with new tools while the latter is an entirely new way of learning.

"The difference with blended learning is that it's somewhere between brick-and-mortar instruction and no-teacher-present instruction," Van Heukelum says. "When you start to design work for kids to do in a virtual space, or you start designing lessons that can flex for in-classroom or online, then you are entering into a truly blended space."

LETTING TECHNOLOGY IN

Many CAOs say the key is digital convergence, or engraining technology into teaching and learning so it is not a feature, but rather a viable and sizable portion of how information is delivered and obtained. Perhaps this means certain in-class assessments are completed electronically. Or maybe it means homework is assigned and completed through a learning management system. It could also mean students are expected to collaborate with each other as much in a virtual space as they do in a physical space. At St. Vrain Valley Schools in Colorado, this has been as simple as embracing technology that enables teachers to put content online so students can access it at any time. The bottom line: In a converged environment, physical and digital are part of the same.

In other districts, such as Washoe County School District in Nevada, blended learning will dovetail with a 1:1 computing model. According to CAO Scott Bailey, access to devices enables blended learning, whereas 1:1 enables personalized learning. "You can't really have one without the other," Bailey says. "A 1:1 learning approach using online curriculum and web 2.0 technologies can create a new learning environment within a traditional brick-and-mortar facility."

Hibbeln at San Diego Unified agrees. "When I go into a meeting, I don't bring pen and paper but instead bring my laptop," she says. "At the same time, kids in my schools have to have a journal? It doesn't make sense. They all should have tablets. The technology enables them to move quicker through the curriculum, email their teachers when they're done with work and interact with other students online in a virtual discussion section. Kids should be project managers of their own lives. This kind of learning allows for that."

ROADMAP TO TRANSFORMING TEACHING AND LEARNING

- 1. Develop the vision and mission for blended learning
- 2. Define what students need to be successful in a blended learning environment
- 3. Identify and obtain stakeholder support and communicate often
- 4. Evaluate potential return on investment
- Allow key stakeholders such as teachers, principals and technology leaders to visit effective blended learning environments
- 6. Assess what existing curriculum, technologies or instruction models can be modified for quick gains

In Bailey's opinion, the application of technology allows for a type of GPS for teaching and learning. "Technology provides real-time assessment, as well as real-time, personalized intervention and enrichment based on an individual student's need as he or she progresses through the K-20 continuum," he says. "Oftentimes, we have to recalculate the student's route based on relevant data."

At Baltimore County Public Schools in Maryland, CAO Verletta White says the convergence was on a much broader scale during the implementation of the district's Students and Teachers Accessing Tomorrow (S.T.A.T.) 1:1 initiative. Once the superintendent set the vision for the district to transform teaching and learning, White and her instructional and technological officers sat down with the executive team to develop separate convergence strategies for eight different areas: instruction, curriculum, assessment, professional development, infrastructure, Board of Education policies, budget and communication. The district refers to these efforts collectively as "conversions," and formed a steering committee to manage each one. Workgroups are responsible for overseeing the progress of each effort — a detail that builds in accountability and keeps everyone involved.

Tying the conversions to a committee also built strong links between the district's instructional side and the business side. According to White, those links facilitated cooperation and coordination across the board. "We don't want to have one system move too rapidly in front of another," she says, noting that by digitizing some traditionally paper-based processes, such as the curriculum development process, the district was also able to reallocate funds. "It's all about working in tandem toward a greater good," she says.

MANAGING THE FUNDING EQUATION

Even with cost savings, a blended learning approach cannot happen without the requisite funding. But it should come as

no surprise to education leaders that funding can be fickle. The biggest potential problem: Funding is strong for three or four years, but then dries up. Another problem: Large amounts of money prompts a big technology buy, only to put the district in the situation where all of the technology is obsolete in four or five years. The key to funding for blended learning is sustainability. This is where districts with grant writers and dedicated funding experts have a marked competitive advantage.

Miami-Dade County Public Schools has handled its funding challenges with creativity and aplomb. In 2014, when the ldistrict rolled out its current digital convergence initiative, Izquierdo spotlighted four major components: applications (i.e., digital content), bandwidth, connectivity and devices (i.e., BYOD) — the ABCD process. The district dovetailed the effort with an E-rate campaign to convert all of the iPrep Academies to building-wide wireless. It also capitalized on a favorable climate for these types of expenditures. In fall 2012, Miami-Dade County passed a \$1.2 billion bond with overwhelming support, which helped build the foundation for the convergence plan.

Ultimately, Miami-Dade County Public Schools pieced together roughly \$200 million in funding for its digital convergence program. In addition to E-rate money for wireless connectivity, this figure represents more than \$40 million in bonds (for upgrades to the network backbone), \$8 million from Qualified Zone Academic Bonds (for supplemental and core resources) and a \$63 million loan from Bank of America for hardware purchases.

PERSONALIZING THE JOURNEY

Most educators today have a handful of lesson plans. However, in the not-too-distant future, some district officials anticipate that educators will have different lesson plans for each of their students. The teachers wouldn't develop these plans on their own. Instead, computer adaptive technology — or software that constantly assesses each student's performance — would help teachers gain a real-time sense of where a student is in a specific curriculum unit and what material that student is ready to engage with next.

Technically, technology to power this future exists today. According to Van Heukelum from Winchester Public Schools, the available solutions are just the beginning.

"Ultimately, your journey will be unique to you and my journey will be unique to me," he says. "The beauty of this system is how the teacher's role shifts to make sure kids are being taught what they're ready to learn."

IMPLEMENTING PROFESSIONAL Learning and development

It's one thing for district coaches to draw up new plays for education; it's another thing for the players — the teachers, in this metaphor — to execute them. This means districts must invest time, energy and money in teaching educators about the importance of blended learning, on-boarding them with impending blended learning programs and training them to deliver precisely what it is the districts want to deliver. Following are steps and best practices for professional development around blended learning.

Establish expectations. Kahle Charles, executive director of curriculum at St. Vrain Valley Schools in Colorado, notes that before his district embarked on its blended learning journey, district officials sat down with teachers and informed them about what they hoped to see in terms of student performance, behaviors and approaches to acquiring knowledge. Specifically, the district wanted students who were critical thinkers and problem solvers. By inspiring teachers with the desired outcome ahead of time, the district was able to get them to embrace the new methods more quickly and easily.

"The more explicit you can be with teachers about what you hope to achieve and how you plan to use technology to achieve it, the more support you'll get," he says. "Especially among teachers who've been doing this for a while, there's going to be some skepticism. It's easiest to overcome that doubt with facts."

Offer plenty of resources. Lawrence Public Schools' Nedved says her district supported teachers in the transition to blended by providing professional readings, models and frameworks to help them understand the new instructional model. Q&A panels composed of teachers engaged in best practices with blended learning were one of the strongest components of the district's professional learning support. Nedved says teachers sharing their stories, struggles, celebrations and needs gave the district powerful insight on where it needed to make adaptations.

Provide formal instruction. Many professional development programs start with some sort of formal instruction. Some districts offer this instruction once or twice a year in the form of multi-day workshops focused on a handful of technologies. Other districts bring in guest speakers for monthly or quarterly mandatory training days. Some districts leverage existing resources and designate library media specialists as the go-to resource for transformations.

Teach the teacher. Some professional development programs are more democratic, hinging on experienced educators who are willing to share their knowledge with their colleagues in both formal and informal formats. At many districts, this means one or two point people — teachers — become the blended learning leaders for each school.

During Nashville Public Schools' implementation of districtwide blended learning, teachers received training through a blended learning format. Coaches were identified at each school to facilitate teacher training within the school and an online course was developed to introduce teachers to the district's vision, tools and pedagogy related to blended learning environments. Additionally, instructional videos based on the pilot schools were incorporated into the teachers' online courses. This format enabled teachers to experience the shift in practice.

In other districts, such as Washoe County School District, the most knowledgeable educators put together "Elevator Guides," which codify best practices for blended learning lesson plans but also double as planning tools.

"The Elevator Guides get us on the same page with a common language," says Bailey. "By providing answers and suggestions for just about every sort of curricular problem one might have, the guides also eliminate uncertainty."

Simplify lessons. For any professional development program to work, it needs to: a) incorporate the tools that will be implemented in the classroom and b) provide educators with immediate takeaways to get them excited about adopting the new approaches. Many experts add that professional development lessons should be short and digestible, so educators don't get overwhelmed.

Involve school leaders. It's important for districts to involve principals in the professional development effort; if school leaders don't know what to look for, they never will understand what to evaluate when it comes time for individual teacher reviews.

Evaluate contracts. There are other ways to satisfy the skeptics — namely with favorable changes to the terms of employment. Currently, educators teach 180 days and most contracts are for 185 days. Some CAOs suggest approaching teachers' unions about 200-day contracts through which the additional days are dedicated to professional development and collaboration opportunities for designing instruction. This approach would compensate educators for the extra time and would codify professional development by building it into the overall structure of the school year. More important, the 200-day contract would mean teachers wouldn't have to miss classroom time for professional development.

At Cabarrus County Schools, officials have devised a strategy to integrate professional development. Starting in 2014, the district identified its best high school and middle school teachers, doubled the amount of students those educators teach, cut the in-person time with these students in half and paid the teachers more to reach more kids and get the same results. "It's been a resounding success," says Van Heukelum, former deputy superintendent for

CHARACTERISTICS OF PROFESSIONAL DEVELOPMENT FOR BLENDED LEARNING

- Is blended and personalized
- Utilizes the same tools that will be used to teach students
- Leverages early adopters and teacher leaders
- Provides immediate takeaways
- Is presented in bite-sized sections
- Provides specialized, embedded and ongoing support
- Creates opportunities for evaluation and continuous improvement

the district. "Our teachers are being compensated at a higher rate and our best teachers are able to teach more children."

UNDERSTANDING BARRIERS AND POTENTIAL LAND MINES

Funding and professional development aren't the only potential pitfalls when orchestrating a blended learning curriculum; there are other potential problems districts encounter every year.

Bandwidth. Districts invest in content and curriculum, but can fail to build the infrastructure to support it. "You can't introduce 100,000 new devices and think the existing network is going to suffice," says Izquierdo. "You need to build in the capacity to grow as necessary, or you won't grow at all."

Connectivity at home. Oftentimes, there's no way to guarantee students will have access to digital curriculum once they leave school. Some districts have had success supplying students with devices and access points that can remain at home. One promising practice has been to provide students with devices and internet access at home through partnerships with local companies that offer their end-oflease devices as donations to the schools. These devices are then deployed to parents through training programs that teach parents how to use them. The Federal Communications Commission's (FCC) expansion of the Lifeline program has allowed more families to purchase discounted broadband and should help minimize this challenge.

Adult guidance. Finally, some experts say a big fail point with blended learning is in the application of curriculum itself — the assumption that school-aged children have adults at home to keep them on task. One solution to this problem: school facilities that enable students to engage in virtual learning from an environment staffed with educators. Another helpful addition: technology facilitators who can help students troubleshoot equipment or access issues. These individuals aren't content experts, but instead technology experts who exist exclusively to step in and handle any tech issues.



n important factor in setting up a blended learning initiative for success is garnering support from students, parents, school board members and the community at large. There are a number of ways a district can accomplish this goal.

Personalize the message. Messaging is critical when garnering support for blended learning. Often, different audiences need the same content delivered differently. Communicating a new program to students requires different marketing techniques than communicating a new program to teachers, parents or administrators. Districts must recognize the language has to change for each audience.

Hibbeln laments, "We can't get our kids to write a paragraph in our classrooms, but they're out there writing 500 texts a day." The lesson? Convince students that what they're already doing can be turned into something special. "I know that putting a bunch of kids in a room and letting bells ring every 45 minutes is not the model," she says.

For parents, communication must take an entirely different format, such as e-newsletters, printed newsletters, Facebook page updates, tweets and more. District-to-parent communication must fill in blanks and be as specific as possible so parents know what the district is doing, why the district is doing it and what their role can be.

Chris McMurray, assistant superintendent at Evergreen Public Schools in Washington, says that if he were to advise other districts on communication, his advice would be simple: Don't surprise people. Put differently, McMurray advocates front-loading information and layering communication to increase understanding.

"If you think about what our job is, we're marketers, and we're in the business of creating rich, authentic and relevant learning experiences," he says. "Marketing that involves listening, identifying needs, creating opportunities and fostering continual improvement — then communicating about it. We're increasing people's ability to know and do. Those are exciting things. It's not a responsibility to take lightly."

Build partnerships. Equally important to the success of a district's blended learning program are partnerships with a variety of entities ranging from parent organizations to higher education institutions, local businesses and local governments. Sometimes these partnerships yield funding dollars. Other times they yield critical support. On rare occasions, they yield both.

The most successful of these partnerships usually are with universities — K-12 districts win because they get personalized attention from researchers and students, and universities benefit because their involvement in the programs usually yields data that can be repurposed on an empirical level. In Florida, ACCESS is a partnership program between Miami-Dade County Public Schools and Florida International University on various research projects in the blended sphere. In other districts and states, high schools have leveraged blended learning to partner with nearby community colleges to obtain college credits prior to graduation.

Other school districts have developed different types of partnerships to address specific needs to support teaching and learning. At Evergreen, McMurray says partnerships are driving a significant part of the student experience, both online and off. For example, partnerships with the district's parent teacher association and other parent groups support and inform curriculum and program design, building understanding in the community. Additionally, the district partnered with local companies, such as architecture firms and aerospace companies, to support problem-based learning. These partnerships give students authentic problems to solve, making the application of academic concepts relevant. For the partners, it's a meaningful way to connect to and support young people as they develop skills to succeed in a global economy.

"So long as the partnerships are real and meaningful, everybody wins," McMurray says. "This isn't just guest speakers talking with students. When the relationships are most effective, the organizations are vested in the outcomes and are integrated into the learning. That puts essentials like creativity, critical thinking, communication and collaboration up front, and raises the learning experience to the high levels our students need."

CONCLUSION

No matter how school districts embrace blended learning, one thing is certain: The historic model of classrooms and desks and one educator doling out knowledge is old news. There are a variety of new frontiers — everything from classrooms with movable furniture and virtual components to new school concepts that look more like community centers where certified teachers and students can meet to work on projects, take a class or a combination of the two. Still other education experts have pontificated about models revolving around one-room schoolhouses with well-trained professional educators, robust technology tools and access to the internet for supplemental learning. As lower cost to entry makes technology more prevalent in K-12 education, districts will likely embrace a blended approach, redefining the education experience along the way.

ENDNOTES

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