District Management Group

INTERVIEW

Blending Online Learning into Schools: An Interview with Clayton Christensen and Michael Horn

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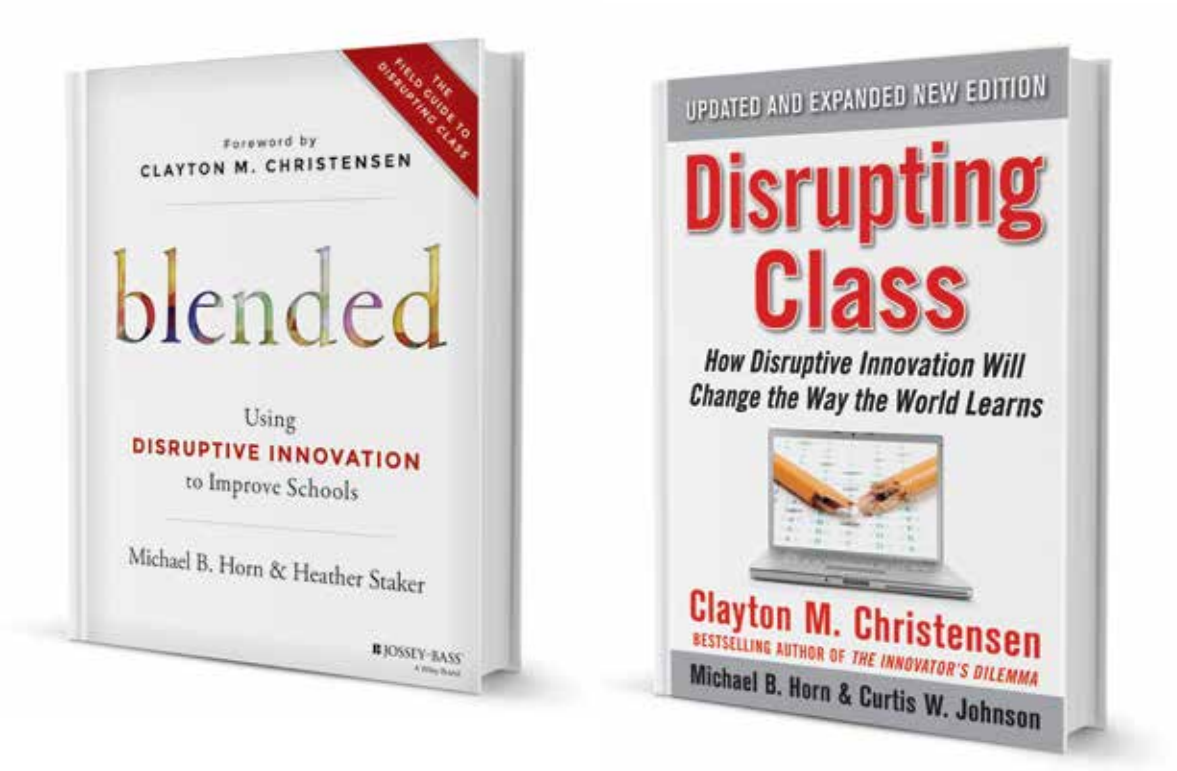
Blending Online Learning into Schools:

An interview with Clayton Christensen and Michael Horn

With the 1997 publication of *The Innovator's Dilemma,* Harvard Business School professor Clayton Christensen launched his theory of disruptive innovation, which has come to be one of today's most influential management frameworks and is being applied to a wide variety of industries.

The cornerstone of Christensen's theory of disruption is that big companies often fail to recognize the opportunity for new technologies or products. Because the new technology or product is in fact often initially inferior to the existing one, it is ignored by established customers, but typically gains a foothold at the lower end of the market where it addresses the needs of an unserved customer base. Over time, the new technology or product develops and improves to the point that it ultimately displaces the earlier one. According to Christensen, a classic example of a disruptive innovation is TurboTax: when TurboTax first came to market, the software was rudimentary, but it offered a simple approach to tax filing for an unserved market of individuals who could not afford personal one-to-one tax services. Over time, TurboTax became more and more sophisticated, introducing features such as "live chat" and "ask the expert." As a result, TurboTax was able to move relentlessly up-market, winning over more-demanding customers and severely cutting into the business of existing firms such as H&R Block and other tax service providers.

This theory of disruptive innovation has proved so compelling that in 2007, Christensen and colleague Michael Horn founded the Clayton Christensen Institute for Disruptive Innovation, a non-profit think tank dedicated to improving the world through applications of the theory of disruptive innovation. The institute applies the framework to various industries that they believe will benefit from disruption in the coming years—and one of these industries is education. In their 2008 book,



Disrupting Class: How Disruptive Innovation Will Change the Way the World Learns, Horn and Christensen discuss the current factory-model education system and posit that emerging technology has the power to enable a new personalized, student-centered model of education that will allow each child to realize his or her fullest potential.

In *Blended: Using Disruptive Innovation to Improve Schools* (2014), the follow-up to *Disrupting Class,* Horn and Heather Staker, a colleague at the Christensen Institute, take the concept of disruption in education even further. Horn and Staker present the institute's theory of a hybrid model—a model that blends new disruptive technology with an old sustaining technology—and explain how education leaders can implement varying levels of disruption in their own schools or districts. Whereas *Disrupting Class* was a theoretical exploration of disruption in education, *Blended* is a tactical "how to" guide to blended learning for education leaders who are looking to take advantage of technology while maintaining some of the benefits of a traditional classroom and school environment.

Clay Christensen and Michael Horn recently sat down with the District Management Council's CEO John J-H Kim and Senior Associate Kyla Wilkes to discuss *Blended.* In this edited interview, they share their vision and their thoughts on the future of learning. →

Clayton Christensen discusses disruptive innovation

CHRISTENSEN DEFINES TYPES OF INNOVATION

Sustaining Innovations: Innovations that help leading or incumbent organizations make better products or services that can often be sold for greater profit to their best customers. They service existing customers according to the original definition of performance.

Disruptive Innovations: Innovations that offer a new definition of what is good. Typically they are simpler, more convenient, and less expensive products that appeal to new or less demanding customers. Over time they intersect with the needs of more demanding customers, thereby transforming a sector.

Hybrid Innovations: Innovations that represent a combination of the new, disruptive technology with the old technology. Hybrid innovations represent a sustaining innovation relative to the old technology. Industries create hybrids for predictable reasons—for example, because the business case for the purely disruptive technology is not compelling and a hybrid innovation allows incumbents to satisfy their best customers.

For more information on Christensen's definitions of innovation, go to www.christenseninstitute.org/publications/hybrids/

Clay, you distinguish between what you have defined as "sustaining innovations," "disruptive innovations," and "hybrid innovations." In *Disrupting Class* and *Blended,* you and Michael and Heather discuss the hybrid model as being applicable to education. Can you explain the concept of this model for our readers?

Clay Christensen: As a general rule, when a new technology emerges, the leaders of the old technology almost always deploy it in the market as a hybrid. So, for example, when the steamboat was first developed by Fulton, the technology wasn't good enough to use for North Atlantic transport. It was dismissed as far inferior to sailing ships, but it did make inland waterways much more accessible and started to be used for this purpose. Over time, steam technology got better and better until it was good enough that people could think about taking steamships across the North Atlantic; but, for a few decades, they used hybrid ships that had steam as well as sails. By about 1910, the technology was finally considered good enough that you didn't need a hybrid anymore.

In a similar way, Toyota, in order to use the new electric car technology, introduced a hybrid. It has to have the best of the old and the best of the new. Ultimately, completely electric cars will be available. But there is a period where you actually need to have a hybrid when you are trying to sustain the trajectory that you're on.

So it is to be expected that we start with hybrid models in education?

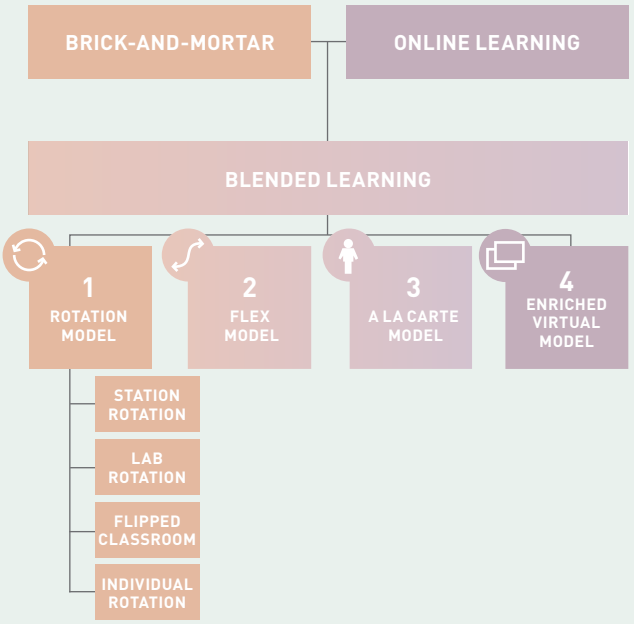
Michael Horn: The theory of hybrids helps explain the evolution of so many industries, from photography to retailing. So far, some of the blended-learning models in use across the country have all the characteristics of a sustaining innovation—they offer improvements to the traditional classroom; other blended learning models have the characteristics of pure disruption, meaning they are drastically changing the way learning environments look. One general rule of thumb for spotting a disruptive model of learning is if you walk into a blended setting and you can't figure out where the front of the classroom is, then it's probably a disruptive model.

Before we go on, can you tell us about how you define blended learning?

Horn: When we talk about blended learning, we are referring to any formal education program in which a student learns at least in part through online learning, with some elements of student control over time, place, path, and/or pace, and at least in part in a supervised brick-and-mortar location away from home. In addition, the modalities along each students' learning path within a course or subject must be connected to provide an integrated learning experience. Blended learning is critically different from—but easily confused with—the much broader trend of equipping classrooms with devices and software. There are lots of models of blended learning emerging, and as I said earlier, some of these models of blended learning are quite disruptive—meaning they look very different from traditional classrooms—and others are hybrids and deliver the advantages of online learning combined with all the benefits of the traditional classroom. →

BLENDED LEARNING MODELS

"Blended learning is still very much evolving, and schools are thinking about blended learning in hundreds of different ways. That said, most of the different models fit somewhere within the broad parameters of four different models that can be combined in various ways," explains Michael Horn.



Rotation – Classroom teachers tend to gravitate toward this model, in which students rotate among learning modalities such as online learning, small-group instruction, and pencil-and-paper assignments at their desks. The rotation concept is nothing new in education–teachers have been adopting some form of this model for years; the new element is that online learning is now part of the cycle.

Flex – Online learning forms the backbone of the flex model. In this model the student is on a brick-and-mortar campus and moves through courses online at his or her own pace. Teachers are on hand to offer face-to-face support as needed. And in some flex programs, the teachers will sometimes initiate projects and discussion to enrich the online modality. Tom Vander Ark, the author of the education blog *Getting Smart,* made a good observation when he said that "rotation schools add some online learning to what may otherwise look like a traditional school [whereas] flex schools start with online learning and add physical supports where valuable."

A La Carte – This is the most common form of blended learning at the high school level; in this model students take discrete courses fully online while also attending a traditional brick-and-mortar school. For instance, if their high school doesn't offer Advanced Placement Korean, a student may take that course online in addition to the regular classes she takes on campus in a traditional classroom.

Enriched Virtual – The enriched virtual model allows students a lot of flexibility. The model requires face-to-face learning sessions, but beyond that, students are allowed to complete the rest of the work online wherever and whenever they prefer.

SOURCE: *Blended: Using Disruptive Innovation to Improve Schools* by Michael B. Horn and Heather Staker

Is a disruptive innovation better than a sustaining or a hybrid innovation?

Horn: A common misconception is that sustaining innovations are bad and disruptive innovations are good. Sustaining innovations are actually very important, as they deliver better and better service to customers who need improved products. For example, a school struggling with dwindling budgets and increasingly complex student needs should be looking to sustaining innovations—you can often find great efficiencies with models that fit squarely in the hybrid zone.

In contrast, the models in the disruptive zone are on a different trajectory; they are working to bring online learning to more students and educators and are on track to gain dominance over the traditional system. While sustaining innovations will improve the traditional classroom, disruptive innovations are more likely to transform an entire school system.

A Lesson from *Blended*

SIX QUESTIONS TO ANSWER BEFORE SELECTING A MODEL

Answering these questions will guide you in making the best model decisions for your teachers and students.

1. **What problem are you trying to solve?**
2. **What type of team do you need to solve the problem?**
3. **What do you want students to control?**
4. **What do you want the teacher's primary role to be?**
5. **What physical space can you use?**
6. **How many Internet-connected devices are available?**

So how does an education leader choose among these models?

Horn: The most common mistake schools make with technology is to fall in love with the technology itself. This leads to cramming—the layering of technology on top of the existing model in a way that adds costs but does not improve results. To maximize the impact of blended learning, you need to start by identifying the problem to solve or the goal to achieve. And you need to state your goal in a SMART way—so that it is Specific, Measurable, Assignable, Realistic, and Time-related. And there are a number of other important questions to answer before selecting a model. In *Blended*, we discuss how to design and choose the right model for your school's needs.

What would *full* disruption look like in education? Where will we see that happen first?

Horn: Full-fledged disruption occurs where there is non-consumption—meaning there are some customers who are literally unserved. In this country, there is no non-consumption of public education—school is available to almost every student, so there is not as clear of a path to full disruption. This is a very different context from emerging markets and countries where you have hundreds of millions of kids who don't have access to school.

However, while there is no non-consumption of schools, I would argue that there is non-consumption as relates to the content and resources of classrooms. If you look at the level of courses and resources offered within K-12 education, there are actually lots of areas in which students are not being served. Schools would love to be able to offer all the advanced courses, but there are *lots* of rural schools that don't have teachers qualified to offer them. Twenty-six percent of high school students attend a school that offers literally zero advanced courses, defined as anything above basic geometry, biology, or any honors English class at all. Yet, they need Algebra II or calculus to be able to get into a good college and succeed there. Additionally, credit recovery and dropout recovery are two huge areas of non-consumption. These are the pockets where the disruption will really gain momentum. Most of the non-consumption we see happens at the high school level, whereas at the elementary level such pockets of unmet demand are not as prevalent or as voiced. Therefore, we predict that disruption is more likely to affect high schools and middle schools than elementary schools.

And lastly, full disruption in schools will affect *different types* of customers than we're used to seeing when studying disruption in other industries. Typically, a disruptive model will start at what we think of as the bottom of the market by serving those least-demanding customers who are satisfied with a more basic product; over time, the product gets better and better and starts to serve more and different types of customers. So a lot of people who are familiar with the concept of disruptive innovation might conclude, "Well, the underserved students (low-income, minority) are at the bottom of the market and the really wealthy students are at the top of the market, so the underserved students should be getting the disruptive technology first." But, in education, it's actually the opposite. The wealthy students are the least demanding in our public education systems. Their parents have lots of resources and the ability to talk to them and spend time with them. It makes sense to introduce new technology first with *these* types of students instead of with underserved students who have more complex needs and may require a better, more advanced product. As in any market, those who are underserved need sustaining innovations. But in most markets, those with the most resources are at the top of the market and those with the least are at the bottom. It's the opposite in education.

At DMC, our theory of action is predicated upon the belief that leadership matters. What is the role of the leadership in bringing blended learning to their districts?

Horn: When *Disrupting Class* came out, a lot of people read it and said, "Oh, this is just going to happen. It's inevitable. Therefore leadership doesn't matter." And my read of disruptive innovation is very different. It says leadership matters a lot. With a sustaining innovation, things often run themselves, right? But when disruption is afoot, we are redefining the classroom—we are rethinking what it means to educate. Leadership is critical.

Christensen: We all are familiar with Adam Smith's invisible hand—the invisible hand or natural force that guides free markets and ensures that resources are allocated to maximize profit. But Smith didn't really talk a lot about the preconditions, such as perfect information regarding prices, etc., that have to exist in order for this invisible hand to work. Alfred Chandler, a member of the Harvard Business School faculty who passed away just a couple of years ago, studied the creation of massive corporations in the 1800s such as the railroads. He found that you couldn't put together a railroad unless you put together the rails. And you couldn't do that unless there was a steel mill. Everything depended upon everything else. In other words, the invisible hand wasn't sufficient in helping to put it all together. Instead, it required the *visible hand of managerial capitalism*. And so Chandler brought a contingency to ➔

Clockwise from top left: Clayton Christensen, Michael Horn and Heather Staker

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Michael Horn speaks to students at a rural school in Vietnam

capitalism—in certain situations, the invisible hand works just fine, but there are a whole host of situations where you need the visible hand of managerial capitalism to make things happen.

And I think that in order to do what we are talking about in education, the visible hand of strong leadership needs to be wielded, because Adam Smith's invisible hand doesn't always have enough information to make the kind of decisions that need to be made. Complex, systemic change in education requires the hand of a strong manager.

You also mention that, in addition to leadership, a culture shift is paramount. How do you change the culture of a school to incorporate this type of dramatic change?

Horn: To me, beginning with a blended approach allows for systems change, but it's not enough in and of itself. You're going to need a whole host of things to change around it—the right policies, the right incentives, the right leaders.

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Culture is critical, and leaders must shape the culture very deliberately. Edgar Schein of the Massachusetts Institute of Technology (MIT) really helped us think about culture as the habitual processes and priorities of an organization—the things that you do without even knowing why. Being very conscious of culture at the outset of a blended learning initiative is important, especially since you're giving students a lot more agency. Having a good culture to really help students and teachers know what to do instinctually at every turn is really important.

"Culture" is often an oblique or fuzzy term to people, but the culture can be either very useful or very toxic in a blended learning environment. In the book, we outline some concrete steps leaders can take to build a healthy culture. Educators and leaders can deliberately build culture by defining a problem or task and pulling together a group of people to help address that problem. It's then important to write down the solution and talk about it as much as possible. But even more important than documenting and discussing, leaders must constantly make decisions aligned to the solution that the group articulated. As we state in the book, the culture is a strong force for good or evil—harnessing it in a positive way is one of the most important things a leader can do.

We've talked a lot about the benefits of blended learning, but we'd be remiss if we didn't ask a question that's on a lot of people's minds—how does technology change the role of the teacher? We've got nearly 4 million teachers in the United States ... what does disruptive education really mean for them?

Horn: We actually have a whole chapter in the book about designing the teacher experience, which we're really excited about. I think one of the things that has gone around the last few years has been "laptops for layoffs." I don't know anyone who is serious about this work who thinks we're not going to have teachers in the future. But I do think the day-to-day activities of teachers will look very different. Teachers have an impossible task right now: as portrayed in the documentary "*Waiting for Superman*," we ask each teacher to be a superman or superwoman. We give them 30 students, all of whom have different academic abilities, and in addition, a whole bunch of non-academic things that are affecting their performance. Then, we ask teachers to reach every single one of them, deliver content, mentor them,

motivate them, make them succeed, and on and on and on. It's an unbelievable number of responsibilities.

Online learning can help. My sense is that online learning can start to shift some of the content and instruction to digital delivery to provide teachers and students with rapid feedback and to free up teachers to spend a lot more of their energy on providing qualitative feedback, leading rich discussions, facilitating small group work, mentoring, and motivating. And by the way, the really innovative schools are blowing up classrooms and creating opportunities to teach in groups, which allows teachers to get recognition from their peers.

Absolutely. It's important that this work be motivating and satisfying for teachers in order for this to succeed.

Horn: Frederick Herzberg wrote a piece in 1968 for the *Harvard Business Review* about what actually motivates people. If you think about the hygiene factors (factors that lead to job dissatisfaction) and the motivators (factors that lead to job satisfaction), you can see we just do a terrible job across the board for teachers. My sense is that blended learning taught by a group of teachers can actually unlock a lot of those positive motivators such as chances for recognition, chances for achievement and advancement, and increased responsibility. Different teachers bring different skills to the table. Some teachers are not into student data analysis—they are not good at it and it's not what gets them going. But other teachers may geek out on it—they want to dive into a program and figure out where and why a student struggled. But while they like the analytical portion, they're not into one-on-one tutoring. Group teaching gives teachers the ability to say," Hey, you know what? You help me analyze, and then I'm going to dive in with that information and really help that child and start to separate these things." That's an exciting opportunity for teachers in a lot of different ways and can help get more people into the career.

What compelled you to write *Blended* now?

Horn: It's been six years since *Disrupting Class* was published. I don't think we could have written *Blended* six years ago. There weren't enough case studies; there wasn't enough knowledge. But we have a much clearer idea of the phenomenon now. So we wrote *Blended* because we thought educators and leaders need a practical design guide to help them think through decisions about incorporating online learning and to have a really clear way to avoid, quite frankly, a lot of the disasters like Los Angeles Unified has gone through.

If you had to leave school leaders with one last piece of advice, what would that be?

Horn: Don't start with the technology: start with the problem you're trying to solve or the goal you're trying to achieve. Then, design from there. Leaders need to start with questions like, "What does the final state of the innovation need to do? What are we trying to accomplish? And how will we know we have been successful?" Focus on developing very specific SMART goals. For instance, Summit Public Schools in California established a goal to dramatically increase their six-year college graduation rate from 55% to 100%. Once these outcome targets have been identified and clearly articulated, schools can begin to design the student and teacher experience. All too often, districts start with "We need a one-to-one computer initiative." That's a solution in search of a problem. Start with an academic problem and don't reference technology. You can then find your solution from there. ◆

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