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**Reviewing *Disrupting Class*:
How Disruptive Innovation Will Change the Way the World Learns.**

Disrupting Class: How Disruptive Innovation Will Change the Way the World Learns.

By Clayton M. Christensen, Michael B. Horn, and Curtis W. Johnson

McGraw-Hill: New York, Copyright 2008. 238 pages.

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by David B. Hand, Ed.D.

Every once in a while, the business world begins to use new terminology or a new word that, over a period of time, becomes the norm and defines a new way of addressing what is happening or a new way of describing a developing thought, theory, or philosophy. This happened when Thomas Kuhn first described scientific theories as *paradigms*. He then coined the phrase *paradigm shifts* to identify sudden or major changes that take place in the prevailing thinking. So today, Clayton Christensen, researcher and professor at the Harvard Business School, along with his co-authors Michael Horn and Curtis Johnson, have introduced the terms *disruptive innovation* and *disruptive change*. Christensen et al. teaches his theories of disruptive innovation—theories that explain how the real world works.

The latest book by Christensen et al. takes the concepts of disruptive innovation and disruptive change from the business world to address a major disruptive change taking place in the world of elementary and secondary school education, thus the title *Disrupting Class*. At first glance one might think this is another book about classroom management. It definitely is not. The subtitle gives the reader a clue to the topic: *How Disruptive Innovation Will Change the Way the World Learns*. The disruptive innovation and change is the rapid growth of *disruptive technology*—computers, educational software, and online, virtual teaching and learning taking place at the K-12 level. The book explains fundamental causes for why schools struggle to improve and then constructs a set of recommendations to resolve those problems through disruptive innovation causing disruptive change.

Even though this book addresses the issues of virtual learning at the elementary and secondary levels, it has ramifications for instructors and leaders in higher education. For over a decade, colleges and universities have been involved in online teaching and learning, but *Disrupting Class* indicates that online learning is now mushrooming across the nation in the K-12 programs. This is going to influence higher education as more and more young college age students will be acquainted with and knowledgeable in online learning. These upcoming students will want—and perhaps even demand—to continue to take online courses at the higher education level. In fact many states are considering doing what Michigan has already done: requiring all graduating high school students in the state to take at least one course online. The rationale for the new requirement is the understanding that all students need to be prepared for the disruptive changes in online learning that are now a major part of higher education.

Christensen et al. opens each chapter with a real world educational vignette that assists the reader in understanding students' challenges in the school environment today. The book addresses the conditions of today's schools and charges that the way we measure a school's performance is fundamentally flawed. The authors identify the causes of the educational malaise in the schools and point out that students have lost intrinsic motivation. Students learn differently and have individual needs and thus should have a customized education that matches the way

they learn and identifies their strengths and areas of multiple intelligences (MI). The authors suggest that to customize, schools need to move away from the monolithic instruction of groups of students and move toward a modular, student-centered approach that uses technology and software as an important delivery system. *Student-centric technology* involves a computer with software that can tailor itself to a student's specific type of intelligence or learning style. In contrast, *monolithic technology* employs a single instructional style for all students. Even computers that have software can be monolithic if they teach all students in the same way.

The book posits the question: Why haven't schools gone down the path of customized, technology-based instruction and learning after the public school system has spent upwards of \$60 billion over the last two decades placing computers in the schools? The answer is that new technologies have been crammed into the existing school structure; instead, the disruptive technology should have been rooted in a new model and allowed to grow and change in a new paradigm of schooling—disrupting class.

To understand the dynamics of what the authors propose, the reader needs to understand the constructs defined in disruptive innovation theory. The theory explains why organizations struggle with certain kinds of innovation and how organizations can predictably succeed by implementing disruptive innovation and disruptive change. An example given in the book is to imagine a graph with the X axis representing time and the Y axis representing performance (see Figure 1).

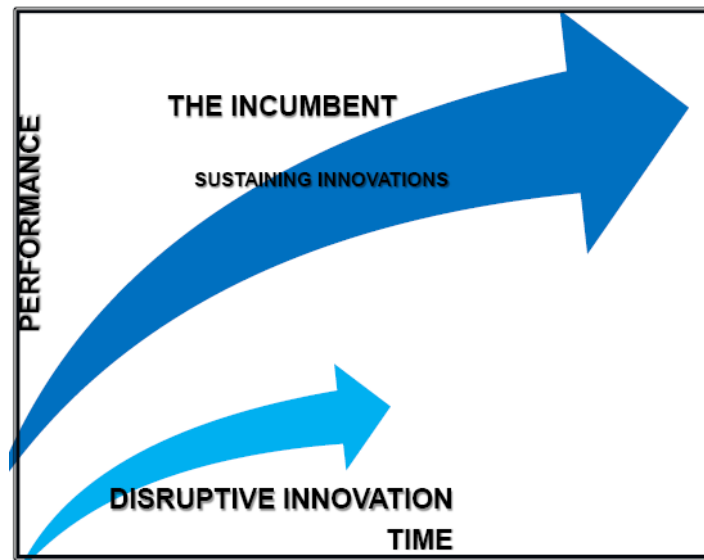


Figure 1. A model of disruptive change (adapted from Christensen et al., 2008).

In this graph, there are two trajectory lines: one representing the existing product or service (the *incumbent*) and another trajectory representing the disruptive innovation. The incumbent line shows a continuous pace of performance improvement, called the *sustaining norm*. At the same time, some distance under the incumbent line, is the line that represents the new and disruptive innovation. As the two lines continue an upward climb over time on the graph, the disruptive innovation does not overtake the traditional incumbent. However, the disruptive innovation is strong enough to shake up the incumbent to the point that the traditional

product or service must absorb the disruptive innovation to improve and remain competitive. Disruptive innovations are what the customers desire, and they desire it at a low price. By making the product or service affordable and simple to use, disruptive innovation benefits people who had been unable to use or apply the incumbent product or service. Disruptive innovations typically cause a dramatic change in the landscape of an industry. The book points out that it is important to remember that the disruptive innovation is usually absorbed by the sustaining incumbent, which then improves the product or service and causes the disruptive innovation to become the norm.

Christensen et al. provide many real-life examples of the application of disruptive innovation theory in the business world throughout the course of the past few decades. For example, personal computer manufacturers such as Compaq and Dell overthrew Digital Equipment Corporation, and large chain stores like Wal-Mart and Target have supplanted numerous department stores. Other examples include Canon disrupting Xerox and the Japanese car companies disrupting Detroit's automakers.

Once Christensen et al. have established the value of understanding the disruptive innovation theory from the business world, they take it a step further to reveal the purpose of this book: applying disruptive innovation theory to customizing student learning and changing the way the world learns by applying computer-based technologies, software, and distance education via online virtual schooling. The authors make it clear that disrupting class is and will be a positive force for improving student learning and overall schooling. Disruption will be the process by which innovation will transform the market of schooling consisting of services and processes that have become complicated and are costing the public large sums of money into one where simplicity, convenience, accessibility, and affordability will be the new characteristics of schooling and education.

The authors point out that up until now, student-centric technology in the form of computers has not had much impact on mainstream public education. However, statistics show that public education enrollments in K-12 online classes are signs of disruption as they have skyrocketed from 45,000 in 2000 to roughly a million in 2008. Disruptions share a pattern; they compete against the incumbent in a new *plane of competition*. In the case of education, that plane is technology. As technology moves from the traditional monolithic classroom to computer-based learning that has student-customized and student-centric technology, the disruptive change will become more accelerated and have a major impact on traditional public and private education.

The authors explain that the disruptive change to learning that is based more on student-centered technology is creating a new market centered on computer-based learning; in fact, this is already happening. Computer-based learning has already gotten a foothold in higher education and is now involved in the next market, K-12 education, and it is gaining at a predictable pace. Like all disruptions, it first appeared as a blip on the radar and now, seemingly out of nowhere, the mainstream of education is rapidly adopting computer-based learning. For example, the Florida Virtual School (FLVS), which began in 1997 as a pilot project for two school districts, has become so successful that it is now its own school district. By the 2006-2007 school year, FLVS was serving 52,000 students in 92,000 individual course enrollments, both in and outside of Florida. This is an indication of the incumbent market realizing the value of the disruptive innovation.

The authors identify four factors that indicate this disruptive innovation will disrupt class:

1. A computer-based learning market that will keep improving, as all successful disruptions do. In the next 10 years, the technology's share of computer-based learning is expected to grow from 5 percent to 50 percent. It will potentially become a massive market.
2. A transition driven by the ability for students, teachers, and parents to select a learning pathway through each body of material. Each pathway fits a type of learner—the transition from just a computer-based learning (same fits all), to customized student-centric technology-based learning environment where the phrase “anytime, anyplace, any path, any pace” (FLVS) becomes part of the incumbent paradigm.
3. A looming teacher shortage. While many have forecast teacher shortages before, this is now more likely to happen. Unless computer-based learning has been honed in the foothold markets described, it won't be ready for the mainstream when school districts will need the accessibility that it brings (Ingersoll, 2003).
4. The cost will fall significantly as the market scales up.

Disrupting Class ends with several challenging thoughts regarding disruptive innovation and how this theory, if applied to our current public education system, could have a profound impact on student learning. However, the authors suggest that it will take innovation with organizational structure changes in the public schools. This impact that structure has on innovation lies at the root of many of public schools' innovative disabilities. Christensen et al. close by claiming it is time to forge change in public schools and give schools the opportunity to innovate right structures and embrace disruptive innovation—it is time to disrupt class.

This book is an important read, not only for those educators involved in computer-based learning technologies and virtual online schools but also for educators in higher education. The future for K-12 online learning is made very clear, and it becomes obvious to those reading the book who are involved in higher education that the demand for even more online learning at the college level will become greater in the near future. The book is also helpful in understanding the issues involved when educators are working as *paradigm pioneers* waiting for the tipping point in virtual computer-based learning. This book is beneficial for all educators interested in improving student learning and who have become disillusioned with the current, nonresponsive school structures. The authors' message will challenge the readers' thinking and may even leave the reader to ask the question: Is it really possible that schooling could become completely virtual within our lifetime? Is it really possible that schools, colleges, or universities will not have walls?

Reference

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