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Online Education Cast as 'Disruptive Innovation'

By **Andrew Trotter**

Technology-based forces of "disruptive innovation" are gathering around public education and will overhaul the way K-12 students learn—with potentially dramatic consequences for established public schools, according to an upcoming book that draws parallels to disruptions in other industries.

Disrupting Class: How Disruptive Innovation Will Change the Way the World Learns predicts that the growth in computer-based delivery of education will accelerate swiftly until, by 2019, half of all high school classes will be taught over the Internet.

Clayton M. Christensen, the book's lead author and a business professor at Harvard University, is well respected in the business world for his best-sellers ***The Innovator's Dilemma***, published in 1997, and ***The Innovator's Solution***, published in 2003.



Clayton M.
Christensen

Those books analyze why leading companies in various industries—computers, electronics, retail, and others—were knocked off by upstarts that were better able to take advantage of innovations based on new technology and changing conditions.

School organizations are similarly vulnerable, Mr. Christensen contends.

"The schools as they are now structured cannot do it," he said in an interview, referring to adapting successfully to coming computer-based innovations. "Even the best managers in the world, if they were heads of departments in schools and the administrators of schools, could not do it."

Under Mr. Christensen's analytical model, the tables typically turn in an industry even when the dominant companies are well aware of a disruptive innovation and try to use it to transform themselves.

But established organizations are trapped in the industry's architecture, through webs of "interdependencies," such as the compensation system for sales forces and the expectations

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of existing customers, who do not want to bear the cost of adopting innovations that initially are inferior to what they were used to getting, he said.

With the advent of new technologies, companies usually resort to "cramming down" the innovations onto their existing systems, an approach that generates only incremental improvement, he says.

Upstart organizations—though they cannot at first compete head to head with the leaders—find markets for innovative products and services among "nonconsuming" groups who are priced out of the main market or are seen as peripheral by the leaders. The nonconsuming groups embrace the innovations, which gradually improve until they are better than the top products—and sweep to dominance, according to the book.

Cramming Down

In the new book, Mr. Christensen and his co-authors apply a similar analysis to K-12 education. Mr. Christensen wrote the book with Michael B. Horn, the executive director for education at the Innosight Institute, a think tank that promotes Mr. Christensen's ideas, and Curtis W. Johnson, a writer and former college president and political aide.

Like the leaders in other industries, the education establishment has crammed down technology onto its existing architecture, which is dominated by the "monolithic" processes of textbook creation and adoption, teaching practices and training, and standardized assessment—which, despite some efforts at individualization, by and large treat students the same, the book says.

But new providers are stepping forward to serve students that mainline education does not serve, or serve well, the authors write. Those students, which the book describes as K-12 education's version of "nonconsumers," include those lacking access to Advanced Placement courses, needing alternatives to standard classroom instruction, homebound or home-schooled students, those needing to make up course credits to graduate—and even prekindergarten children.

By addressing those groups, providers such as charter schools, companies catering to home schoolers, private tutoring companies, and online-curriculum companies have developed their methods and tapped networks of students, parents, and teachers for ideas.

Those providers will gradually improve their tools to offer instruction that is more student-centered, in part by breaking courses into modules that can be recombined specifically for each student, the authors predict.

Such providers' approaches, the authors argue, will also become more affordable, and they will start attracting more and more students from regular schools.

Mr. Christensen and his co-authors apply an S-shaped curve, accepted in the business-research literature as a mathematical model of disruptive change in industry, to data from 2000 to 2007 to predict that by 2019, online learning will account

E-Volution

A new book predicts that the share of high school instruction that takes place over the Internet will start rising sharply in about four years, until online courses constitute more

for 50 percent of high school course enrollments.

The prediction is based on current projections of the supply of qualified teachers and of the costs of traditional and computer-based learning. "As long as that ratio stays the same, we'll see that happen," Mr. Christensen said. "Who knows if it is 2019, 2017, or 2020, but sometime around there, it should hit 50 percent."

The book does hold out hope that established school organizations can adapt to disruptive innovation.

In other industries, the few established companies that have done so have spun off separate units that adopt the innovations independently—and eventually take over from their parent organizations, according to the book. One example it cites is Dayton Hudson Corp., the venerable department-store chain, which survived the onset of large discount retailers by creating a separate unit, Target Stores Inc. Target has become a major force in discount retailing.

Paul D. Houston, the executive director of the American Association of School Administrators, based in Arlington, Va., is familiar with Mr. Christensen's theories and research, though he has not read the book, which McGraw-Hill is due to publish next month. "I'm so pleased he is looking at the education space," Mr. Houston said. "It's going to be very provocative and probably a little controversial, in that it will force people to get out of the box to look at solutions."

Mr. Houston cited the example of Target as one route school districts may follow to find the "flexibility, which we all know doesn't exist" in public schools, to embrace student-centered innovation. "We've promoted, for some time, the idea of school superintendents creating their own charter schools, instead of resisting this stuff," he said.

Some teachers' union leaders are paying attention, too.

Favorable Reaction

The book is "brilliant," said Adam Urbanski, the president of the Rochester, N.Y., affiliate of the American Federation of Teachers and an AFT vice president. "Most people pose the question of how we can improve the current system," he said. "[Mr. Christensen] poses the different question of how we can have a different system than what we already have."

Mr. Christensen and his co-authors plan to talk to educators about their ideas in the coming year, including at national conferences of administrators and teachers. They also will lay out their ideas in the summer issue of the journal *Education Next*.

Another vehicle is the Innosight Institute, the nonprofit think tank in Watertown, Mass., that Mr. Horn and Mr. Christensen co-founded in

than 50 percent of all high school course enrollments by around 2019.



Source: *Disrupting Class*

Online Opinion

A national survey of 3,200 adults found more

2007. The institute will help grantmakers target “innovations that will have an impact on the structure and the performance of schools,” Mr. Christensen said.

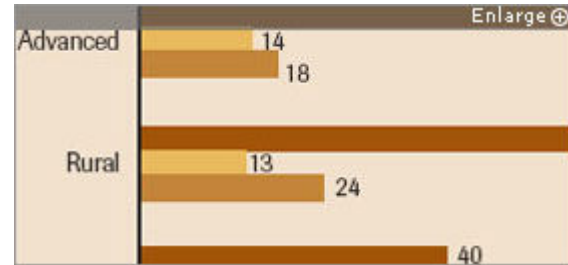
He underscored that the book does not aim to frighten school leaders, but to urge them to treat the approaching changes as an opportunity rather than a threat.

“If they will set up heavyweight teams and create the new architecture for the curriculum in a new space—so they have a school within a school, or a different school underneath the umbrella of the district—at that level the school can truly transform itself,” he said.

Mr. Christensen suggested that the changes he foresees could have even broader implications.

“Whenever an industry gets disrupted, people always consume more, because it’s more affordable, it’s simpler, easier to access, to customize to what they need,” he said. “What a wonderful thing, that we would consume more education.”

support for advanced, college-level courses for high school students and online courses for rural students with limited coursetaking options than for courses targeting dropouts or home-schoolers.



Source: *Education Next* and the Program on Education Policy and Governance at Harvard University