March 6, 2014

Can disruptive innovation transform South Korea’s schools?

by Michael B. Horn

As I turn from my time in Vietnam studying its education system and opportunities for innovation and move to chronicling my three weeks ahead in South Korea toward the same purpose, the two countries present an interesting juxtaposition of education and development in different circumstances and stages.

The countries have striking similarities in their histories. Like Vietnam, Korea has been invaded often throughout history and was subjugated as a colony in the previous century. Both have been influenced strongly by China and Confucian values. Decades ago, war ravaged both. They were each divided into two countries. And both have experienced stunning economic growth. Korea moved first, as its companies have been disrupting Japanese companies over the last couple decades. After years of strict communism, Vietnam’s economy has shown some signs over the past couple decades of using a disruptive strategy as well.

In several ways, Vietnam now resembles Korea a few decades earlier, just as Korea was beginning its own exponential growth to the tune of a GDP that has risen about 40,000 percent since 1962, according to Amanda Ripley’s The Smartest Kids in the World: And How They Got That Way. Indeed, in 2010, Korea invested $82 million of development aid into Vietnam, the top recipient of its foreign aid, according to Daniel Tudor’s book, Korea: The Impossible Country.

Korea then is at a different stage in its development with different challenges from those confronting Vietnam. In the aftermath of the Korean War, the country rebuilt itself before the advent of online learning and thus replicated much of the factory model of education while also leveraging its Confucian traditions. It is a developed nation with students and families that have devoured education as a means to escape poverty and experienced incredible educational success. In 1945, only 5 percent of people had graduated with secondary school or higher-level qualifications, according to Tudor. By the early 1990s, 90 percent had.

Yet Korea arguably did this in spite of the quality of its public education system, not because of it. Many in Korea speak poorly of a factory-model education system that has emphasized rote memorization, tolerated little discussion from students (let alone personalization), and is highly inefficient, as students study long hours, sleep little—5.5 hours a night according to a recent survey, and have little time for outside activities through high school. High extrinsic motivation to study hard, go to college and escape poverty along with a Confucian culture that holds education in the highest esteem has helped the country boast some of the top educational outcomes in the world. These factors alongside a lagging public system have also helped create a robust private market for education outside of the publicly funded schools, as its citizens spend a significant part of their disposable incomes—over a third of their total income on average, according to Tudor—on private education in hagwons, or cram schools.

A key question for Korea is this, however: As it reaches and cements its prosperity, can it maintain its educational...
edge if it does not change its public education system into a student-centered one that can personalize learning for each child’s different learning needs and be intrinsically motivating?

There are causes for concern.

As we wrote in *Disrupting Class*, when Japanese companies were developing their world-class manufacturing clout and disrupting U.S. companies in the 1970s and 1980s, a common explanation was that four times as many Japanese college students were studying math, science, and engineering than were U.S. students—despite the fact that Japan had only 40 percent of the population of the United States. These scientists and engineers, many concluded, were responsible for Japan’s economic ascendancy, which was seen widely as a threat to the U.S. economy.

As Japan reached prosperity, an interesting thing happened, however. The percentage of students that graduated with science and engineering degrees declined. Why did this happen? The answer has little to do with the schools themselves, which did not change significantly. Prosperity was the culprit. When Japan was emerging from the ashes of World War II, there was a clear extrinsic motivation that encouraged students to study subjects like science and engineering that would help lift them out of poverty and reward them with a generous wage. As the country and its families prospered, however, the external pressure diminished.

Some people who are suited to enjoy science and engineering in the way schools traditionally teach it—and therefore are intrinsically motivated—or those who have other extrinsic motivations in play still study them. But many no longer need to endure studying subjects that are not fun for them.

As the U.S. president John Adams famously wrote:

I must study politics and war that my sons may have liberty to study mathematics and philosophy. My sons ought to study mathematics and philosophy, geography, natural history, naval architecture, navigation, commerce, and agriculture in order to give their children a right to study painting, poetry, music, architecture, statuary, tapestry, and porcelain.

Adams was on to something. As a developing country develops an industrial-based economy, studying science, math, and engineering offer big rewards that ensure students an escape from poverty. When the same country achieves stability and prosperity, students have more freedom to study subjects that they find fun and intrinsically motivating. But there are questions if in a knowledge economy this will suffice as a long-term strategy.

As Larry Summers wrote in the foreword to the book *Endangering Prosperity: A Global View of the American School*, “In a knowledge economy nothing is more important than the cognitive quality of those who produce goods and services.” Of course, the subjects that students find fun may contribute to their fortunes and those of the nation, but there is also a good chance that they will not as well.

There are some early signs in Korea that the same challenge is amiss, as the numbers of science and engineering students have been declining for some time as the economy has prospered. Historically, education—and college specifically—has been the only stepping stone to success. This could change. If college does not offer the same returns that it once did in Korean society and there are other pathways to success—already, according to Tudor, young Koreans suffer from unemployment and underemployment, as the economy creates roughly 100,000 “good” jobs a year, but universities are churning out 500,000 graduates a year—can Korea maintain its long-term edge? Perhaps its Confucian culture’s emphasis on education will be enough to get by, but that seems far from certain given the vast unhappiness reported in Korean society, which it seems reflects some dissatisfaction with the education system. At the very least, I don’t think it’s worth the gamble.
My question is can Korea leverage the disruptive innovation of online learning to transform its schools into an intrinsically motivating, student-centered, and personalized education system that is far more efficient and pleasant for its students? Given that the country’s education system is so developed, are there enough areas of nonconsumption into which disruptions can plant themselves to help make this shift? Will the country’s incredible technology infrastructure allow it to make the transition more readily than others? Will its parents even welcome such a shift, and will its policy environment support it? I look forward to learning.

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