Information about RAD is available at www.acu.ac.uk/adverts/rad, or via e-mail, at rad@acu.ac.uk. Those interested in RAD can register on the RAD information e-mail list to receive updates on the scheme's progress by simply sending an e-mail with "RAD Information Email" in the subject box. Piers Pennington can be contacted at RAD, by telephone, at +44 (0) 20 7380 6739, or by fax, at +44 (0) 20 7383 0368.

Reinventing Singapore: Changing a Country's Mindset by Changing Its Education System Paul FitzPatrick

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"Singapore is a fine city" proclaim the T-shirts on sale in Singapore's central tourist district. This is, of course, a reference to the rules and regulations that exist here and that are famous throughout the world. Coming from a country where we are not even obliged to carry identity cards, I was initially somewhat apprehensive about living in Singapore. Such was my paranoia that jaywalking during my first week upon arriving caused me to take refuge in a shopping mall for 15 minutes, convinced that I had been spotted by a cruising police patrol!

In his 2001 publication, "Why Asians Are Less Creative than Westerners," Asian academic Ng Aik Kwang suggests that, although well intentioned and indeed effective, punitive sanctions can inhibit independent thinking as well as creative expression. In his view, if people are conditioned to respond to prods and punishments they are prone to becoming passionless and passive and developing conformist tendencies, traits that are liable to stifle their creative potential. Relying upon others to organize our lives by telling us what we can and cannot do may also undermine the basic principle of innovation, which is developing a sense of self-reliance, a belief in oneself, and, of course, a willingness to take control of one's own life.

How would you react if it was suddenly announced that a building of some architectural significance in the center of New York or Boston was to be demolished to make way for an office block? When a billboard went up outside one of Singapore's ancient buildings informing people that it was to be replaced with a high-rise glass and steel structure, only four people even bothered to inquire why. This, however, wasn't a serious proposition. It was simply set up as an experiment designed to test

levels of social acquiescence. It served to demonstrate that Singaporeans simply didn't feel that it was their place to question the judgment of city planners.

Mindful that too much of a nanny state can be a bad thing, the Singapore government is trying to encourage Singaporeans to loosen up and think for themselves. In response to this, various government initiatives have been set up to promote independent thinking skills and creative expression. Most recently, a government review committee came up with a new economic model for Singapore. The model is based on new economy thinking, namely that economic growth in the future will be based around "knowledge" and other intangible concepts. Connecting ideas will become more important than the ideas themselves. Future growth will be driven by creativity, innovation, and the ability, to use a popular cliché, "to think outside the box." According to the review committee the most effective way of changing mindsets is through the education system. Consequently, it recommends that Singapore's education formula needs to move from uniformity to diversity, from rigidity to flexibility, from conformity to resilience, and from molding to empowering.

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Singapore has three universities: the National University of Singapore, Nanyang Technological University, and the recently created Singapore Management University. In a country that places so high a premium upon academic excellence, competition for places is particularly intense. To place this in context, it is said, for example, that Singapore's top 50 percent of young people matches the top 10 percent in many other developed countries in terms of educational attainment. Singapore's education system is consistently ranked as being one of the best in the world. However, the concern now is that it is too exam and knowledge oriented, which is conducive to producing "cookbook" graduates who, despite having good exam results, lack the ability to think for themselves or to be innovative.

In response to this, Singapore's three universities are reviewing their admissions criteria and also their teaching methodologies. Specifically, rather than just looking at raw grades, admissions tutors are being encouraged to look at the whole person, both in terms of their past achievements and in terms of their potential. Among the proposals are aptitude tests as well as awarding credits for project work and for extracurricular activities. Proposed curriculum changes include the introduction of multidisciplinary

degrees and allowing science, engineering, and medical students to take arts modules. One specific concern of the review committee is the perception of Singapore as a "mono-discipline" country where sciences and engineering predominate. Other proposals include reducing lecture hours in favor of facilitated learning and the introduction of open-book exams.

But it's at Singapore's newest university, Singapore Management University, where the real groundbreaking changes are taking place. SMU has dispensed with lectures entirely in favor of facilitated learning, and soft skills development is now part of the academic curriculum. Emphasis is placed upon developing leadership, team skills as well as creative thinking, and emotional literacy. SMU also considers it important that students are given space to develop specific strengths and even passions. In other words the university has redefined the concept of the learning experience to encompass nonacademic pursuits. Likewise the university is placing greater emphasis upon breadth by allowing students to cover more disciplines, albeit it in less depth. The idea is to encourage them to identify the connections between disciplines, enabling students to gather and synthesize knowledge from different fields. A curriculum that is broad based is also seen to offer more perspectives, thus promoting independent learning and creative exploration. As well as being motivated to read more widely, students will find it easier to apply different modes of inquiry to a wider range of academic as well as nonacademic issues. The university's stated aim is to harmonize academic rigor with soft skills training. By moving away from a structured learning model, SMU hopes that their graduates will be better equipped to contribute to an innovation-driven economy.

SMU has dispensed with lectures entirely.

At the same time, there's little point in changing the philosophy of higher education without changing what precedes it. Changing mindsets requires starting at the preschool level. The government has been pushing concepts such as creativity and emotional literacy at secondary, primary, and kindergarten levels for some time now. Plans are underway to retrain teachers. The review committee recommends a shift away from "time efficient methodologies" to facilitated learning that is designed to nurture flexible mindsets. In other words, the emphasis will shift from the teacher to the learner. Also, at the junior college level, A Levels are under review. The review committee considers them to be too rigid and content focused. One possibility that is being mooted is a French-

style baccalaureate with greater emphasis upon an integrated style of learning. Like the universities, more flexible teaching methodologies are being adopted at secondary, polytechnic, and junior college levels. In other words, the entire ethos underpinning education in Singapore is being recast.

Singapore's three universities are reviewing their admissions criteria and also their teaching methodologies.

You don't transform what was little more than a distant colonial outpost and a collection of small fishing villages 40 years ago into Asia's Garden City metropolis with one of the world's most competitive economies in just three decades, without some direction from the top. In this respect, Singapore's achievements are unsurpassed. Singapore's emergence as a leading industrialized nation during the 1960s and 1970s had a lot to do with the government providing direction. Policies were formulated by ministers and civil servants, and goals were set and usually achieved. But the concern among Singapore's political leaders is that this has instilled in its citizens a conformist and "safety first" instinct that is ill-suited to today's needs. This is why they are trying to transform Singapore from being just a productive society into a creative and risk-taking society. In other words, after years of telling their citizens what they can and cannot do, they now want them to do their own thing and to be different. According to Prime Minster Goh Chok Tong, "we must get away from the idea that it is only the people at the top who should be thinking and the job of everyone else is to do as they are told." This view was endorsed by Senior Minister Lee Kuan Yew, who expressed concern that a lack of independent thinking might limit Singapore's capacity to respond to the challenges of the information age. According to David Lim Tik En, minister of state for defense, we must develop the capacity to tolerate failure. We must also teach our young people that failure is an opportunity to learn rather than an opportunity lost. But above all we must teach them to ask, "why?"

I no longer feel the compulsion to hide in shopping malls. In reality fines for jaywalking are rarely enforced. Even the rules pertaining to chewing gum are under review. Meanwhile, water dispensers recently started to appear in Singapore's subway stations. Accompanied by a sign warning people that if water was spilled outside a designated area, the dispensers would be withdrawn. Water was spilled and the dispensers were subsequently withdrawn. Old ways of thinking die hard!