

## GLOBAL

OPPORTUNITY, COLLABORATION & DISCOVERY

### The Creativity Initiative in Singapore

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*"How do you transform an education that is good at exam success and learning mastery into something that is flexible and creative without losing rigor?"*

*-Bill Jackson*

#### **Singapore's Transformation in Education The Creativity & Critical Thinking Initiative**

See Core Principles Below

By Bill Jackson

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Day 3

The last two days we listened to talks about Singapore's education system by officials from the National Institute of Education (NIE), the Ministry of Education, and the World Bank, the Marshall Cavendish Institute and representatives (including yours truly) from various countries that are using Singapore math. The following are summaries of some of the presentations.

#### **Education Transformation: The Singapore Education Journey**

by Dr. S. Gopinathan, Professorial Fellow, National Institute of Education

Dr. Gopinathan, or "Prof Gobi" as his students know him, says, "You can't understand Singapore without being in Singapore." In other words, you cannot understand the success of Singapore's educational system or its highly touted mathematics program without understanding the history of modern Singapore.

*Singapore reluctantly became an independent nation in 1965, after being involuntarily ejected from the Malay Federation. The new nation of three million people faced many challenges including its multi-ethnic make-up consisting of 75% Chinese, 15% Malay, and 10% Indian. Also, Singapore had no natural resources. But it did have some advantages. As a former part of the British Empire there was a well-developed port infrastructure with workers skilled in the art of shipbuilding. Singapore's leaders understood that given this reasonably unfriendly environment human capital development, especially through schooling, would be the key future success. "If we don't get education right we couldn't do anything. Failure was not an option," they reasoned. The challenge was to develop a quality labor force that can take advantage of our modern, technological society.*

In order to develop a successful society that can compete in the modern world, **five core principles** were established for the tiny island nation.

1. **A "meritocratic" system in which citizens are guaranteed equal opportunities** but not equal outcomes. This necessitates a demanding

educational system with high stakes tests in grades 6 and 10. (It was both strange and interesting for me to see in every school we visited sayings written on the walls such as, "Uphold meritocracy and incorruptibility.")

[View image](#)

2. An educational system designed to build **social solidarity and cohesion**. Singapore is ethnically and culturally diverse so schools are designed as centers for building Singaporean identity and citizenship, and promote religious and ethnic tolerance.
3. A balance between **personal and social responsibility**. Singapore is not a welfare state. Individuals must accept responsibility and are held accountable for their own personal success or failure. (One saying I read on the wall of a school said, "Singapore owes you nothing.")
4. **A huge commitment of resources** to ensure high quality education and teacher training. The importance of education in Singapore can be seen in the fact that *most of the prime ministers and government leaders were at one time education ministers*.

There are **three key features** of Singapore's school system.

1. **Equality of treatment**. Given the multiplicity of languages, there must be an even handed approach so English is the main language of instruction but Mandarin, Tamil and Malay are learned as "second" languages throughout the primary school years. Bilingualism is important.
2. **An emphasis on math and science**. Since modern society is based on technology, students must be proficient in math and science. But technology changes quickly and every 3 to 5 years there are major changes in the tech skills students need to have. IT skills are developed beginning in the early primary grades and Singapore's polytechnic universities are especially good. The Ministry of Education and other government agencies work together to anticipate math, science, and technology needs 10 to 15 years into the future.
3. The importance of **rigor and standards**. Singapore has a well-defined and rigorous curriculum and expectations at every level. Achievement is linked to merit and effort.

In 35 years Singapore has become like a well-oiled machine characterized by efficient utilization of resources, high secondary (high) school and college graduation rates. (The 1% high school drop out rate is troublesome for Singapore because every child that drops out is a concern.) Singapore is also facing some problems such as a low birth rate, which requires immigration in order to maintain a sizeable labor force. Immigration presents additional challenges for Singaporean society.

### "Thinking Schools, Learning Nation" : The Creativity & Critical Thinking Initiative

Singapore's success in the future requires not only discipline and proficiency in math and science but also creativity. It is difficult to change Singapore's educational system because of this success. The world is changing rapidly. China is able to out-produce Singapore so just producing goods is not sufficient.

How do you transform an education that is good at exam success and learning mastery into something that is flexible and creative without losing rigor? In 1997, Singapore began an initiative called "Thinking schools learning nation," which emphasizes more creativity, innovation, and critical thinking in classrooms.

Success in this area, however, is not as great as they would like it to be. In order to further this goal into the 21st century the Ministry of Education is emphasizing the following policies.

1. **Investment** of billions of dollars in research and development for biomedical, nanotechnology, and other new sciences.
2. A movement towards **decentralization** of the educational system, including the creation of "independent schools" (very much like charter schools in the U.S.) that have a greater degree of autonomy.
3. An emphasis not just on promoting academic achievement but on **getting children engaged in their own learning** and passionate about school and education.
4. The introduction of **"niche schools"** that focus on special areas, especially the arts. These niche schools teach all subjects but emphasize themes such as sports, art, music, and technology.
5. Giving **students and parents more choice**, variety and flexibility so their children can choose different pathways to success.
6. A heavy investment in **teacher learning**, including the development of professional learning communities through collaborative processes such as lesson study.

To sum it up, in the past 35 years Singapore's educational system has allowed it to rise from unfavorable circumstances to success. However, Singapore's educational system does not rest on its laurels but continues to anticipate its needs well into the future and make significant investments in education.

Link to Day 1 - Part 1 - ["Singapore: Five Surprises in Education"](#)

Link to Day 1 - Part 2 - ["The Professional Lives of Teachers in Singapore"](#)

Link to Day 2 - ["The Teacher Model In Singapore: What Matters Most"](#)

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On Friday, check in at The Daily Riff for Day 4 . . .

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