

HOW CAN EDUCATION SYSTEM OF SINGAPORE CONTRIBUTE TO NATION BUILDING

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Abstract: A nation's character can be built through the education. In addition, the advancement of a nation can also be driven by the quality education. A good education will guarantee a nation's wealth and its competitiveness in science and technology. A few decades ago, Indonesia was well known for its quality education system and the human resources. As the result, many Indonesian teachers were sent abroad to teach other nations. Yet, today from the Human Development Index, Indonesian must admit other nations' superiority in their quality human resources. This article tries to portrait the education system of Singapore and its implication to its nation building.

Key words: Education system of Singapore, nation building

It is widely known that a Country's National Character such as, economy, culture, social circumstance, structure of society can determine its Education System. Education System of one country can also bear the uniqueness and commonalities found in System of Education of other country. Education Policy and policy maker in one country can be seen as the reaction or response to its national needs, trends, tradition and to international influences. Singapore is a small island – nation with small population of about 4.6 million people and also with multi-cultural and multi-social. People with different ethnic background have come to Singapore for various purposes. They may come to study, to get job, and pursuit a better life. There are about 90% Chinese, Malaysian, Australian, Indonesian, French, German and so forth. People of Singapore are very obedient to law and regulation. Law enforcement and clean government have been running well. Hereby, every citizen and elements of society follow rules. For example, the companies or industries which do not recruit the skilled employees they receive sanction from the government. By this means educational department is demanded to be responsible to quality of output.

The way the government manages its multi-ethnic with the strength and weakness they posses results in a unique social and education situation in Singapore. Human capital is treated as a key to gain a success in nation building to be able to face world shifting. Investment in education has been a national priority. Education is preparing the students with core knowledge and skills, and the habits of learning that make them experiment long life education. Regarding to its nation uniqueness as well as its diversity, learning System of Education of

Singapore is useful. It can enrich our Education horizon. It is important to know how the government of Singapore tackles education for the nation development. Learning some aspects of education also means that some of goodness (strengths), success and badness (weaknesses), failure can be identified. This, then, can be a meaningful insight to take necessary steps in policy and implementation to benefit learners. Regarding to time constraints the aim of this essay is not specifically discussing time line of educational system instead of only limited to describe some aspects of existing education system of Singapore.

THE ROLE OF MINISTRY OF EDUCATION

Ministry of Education (MOE) manages the Education. The education policy, the development of administration of state schools that receive the government fund are directed and controlled by the Ministry of Education. The Ministry of Education also has an advisory and supervisory role to private schools. There are differences in the extent of autonomy between private and state schools. They are different in curriculum, scope of government aid and funding, tuition burden on the students and admission policy. The government through the Ministry of Education spends 20% of the national annual budget for national education programs. Children with disabilities have an equal right to get education. The program is run by Voluntary Welfare Organizations (VWOs) which is funded Ministry of Education.

POLICIES IN EDUCATION

In 2000, the parliament of Singapore passed the Compulsory Education Act that codified compulsory education for children of primary school age. The parent of children of primary school who do not enroll their children in school can be charged as a criminal offence. Exemptions are allowed for homeschooling or full-time religious institutions, but parents must apply for exemption from the Ministry of Education and meet a minimum benchmark.

There are also education policy called Meritocracy, mother tongue or bilingualism, and financial assistance. Meritocracy is a central political concept in Singapore and a fundamental principle in the education system which aims to identify and groom bright students for position of leadership. This system emphasizes on academic performance in grading the students and grading their admission to special programs and universities. Academic grades are considered as objective measures of the students' ability and effort. Having good academic credentials is seen as the most significant factor for the students' career prospects in the local job market, and their future economic status.

The bilingual policy was adopted in 1966. Mother tongue policy is a cornerstone of Singapore education system. English is the first language and the medium of instruction in schools. The mother tongue is a compulsory examinable subject whereas the use of English as first language and medium of instruction is to promote English as the common and neutral language among the diverse ethnic groups in Singapore. Besides, the use of English as the first language also serves to accelerate Singapore's integration into world economy. The official mother tongues are not taught in English. Yet, there are also some schools have been experimenting with the curricula that integrate language subjects with

mathematics and sciences using both English and second language. Curriculum system uses Competency Based Curriculum.

Financial assistance is to ensure that no child is left behind in education and experiment principle “education key for future”. School fees in public schools are subsidized such that the students pay as low as \$ 13 for fees. In addition to this policy, the Financial Assistance Scheme (FAS) is to provide financial assistance for education to low income families.

THE STRUCTURE OF THE EDUCATION SYSTEM AND IMPLEMENTATION

As in other countries, in Singapore there are numerous levels of education starting with three years of pre-school (Nursery), Kindergarten I and Kindergarten 2 continued to Primary Education or first stage of formal schooling. This level is classified into foundation stage (4 years) and orientation stage (2years), and at the end of sixth, students take Primary School Leaving Examination (PSLE) the next upper level are Secondary Education, post-secondary institution or pre-universities (the polytechnics and the Institute of Technical Education/ITE, and universities. There is something different found in the system of the secondary education in Singapore. This level introduces streaming program or separation of students into different categories (special, express, and normal). In relation to Streaming program, there are secondary institutions offer Gifted Education Program and Integrated Program (Through-Train program; a scheme which allows the cream of secondary schools to bypass “O” level and take “A” level) and admission to post-secondary institution. To enroll the secondary schools the students have to pass the National Primary School Leaving Examination (NPSLE). The students can also take one of three programs provided by the government: special, express, or normal. The Special and Express are four-year course leading up to a Singapore Cambridge General Certificate of Education Ordinary Level (O-Level). The students who want to join this program must pass Mother tongue examination. It is a requirement. Normal program is a four-year course leading up to a Normal level (N-level) this program is divided into Academic (Design and Teaching) and Technical. The upper level are Pre-University, Diploma and vocational Education including engineering, tourism, mass management, digital media, hospitality management, biotechnology and Universities. Diploma and vocational education are industry-oriented education as alternative to junior colleges for post-secondary studies. In addition, to meet expatriates’ education, some international and offshore schools are established in Singapore.

The goals and school activities vary according to level of education. For example, the kindergarten level is directed to how to communicate, play, and interact with other then for the start of formal education in Primary Education. Activities are learning language, number, and development of personal and social skill, game, and music, outdoor. The students of kindergarten learn two languages English and official mother tongue (Chinese, Malay, and Tamil). Meanwhile the language applied for the students of Primary Schools are Chinese, Malay, Tamil, Indian language, mother tongue. The subjects the students of primary schools learn are science and math. For secondary

institutions, there are six to ten subjects provided usually elected by students to sit at O-Level grouping into: a). languages (English language, mother tongue languages, and foreign languages; French, German, And Japanese). b). Humanities (literature, geography, history, principle of account, music).c) Mathematics and science (mathematics, physics, biology, or combined sciences). d). Others (general art, design and technology, computer application, elements of office administration, elements of business skills, food and nutrition, religious studies). The compulsory Subjects for “O” Level are English language, mother tongue, mathematics, combined humanities, science, and one other subject.

Most schools follow grading system applied at Singapore-Cambridge “O” Level examination. The scoring is conducted when the students sit for at the end of four or five year of secondary education having at least 6 subjects. The level of achievement in each subject is indicated by grade obtained with the criteria A1/A2 (Distinction), B3/B4 (Merit), C5/C6 (Credit/Pass) D7 (Sub-Pass/fail, that is, passing at a lower standard in the exam or fail), E8/F9 (Fail). A student’s academic performance is measured through point of grade. Grade A1 being 1 point, A2 being 2 points, B3 being 3 points. Thus, the fewer the points gained, the better the score the students have.

From January 2006, the pre-university curriculum was replaced by the new curriculum calling for the need to learn across disciplines such as Mathematics, Science, and Humanities. The change of curriculum is a concrete response to the critics stating that the old curriculum simply focuses on learning to excel in examination rather than on creative, critical thinking, and on learning for life-long skill. The new or differentiated curriculum framework gives students more choice of subjects to choose from and enables more permutations of subject combinations. In addition to the superiority of the new curriculum, it allows the students with different abilities and learning styles to develop, and sustain an interest in their studies. Unlike in the old curriculum which is said to be too specialized, rigid and unholistic, in the new curriculum students are required to take up at least one contrasting subject- for example, science students have to take up at least one Arts/Humanities subject. Alternatively, they can choose to take up a new subject, Knowledge & Inquiry (KI) and general paper. KI is designed to expose students to Epistemology as well as to the construction and nature of knowledge. The provision of KI is meant to be pragmatic and promote students’ critical thinking. The examination is in the form of research paper or research work. While, Arts/Humanities students must take up at least one science-based subject, e.g physics, chemistry, and biology.

It is not the same as in Indonesia, in Singapore co-curricular activities /CCA are compulsory at secondary level, where every student must participate in at least one core activity, and participation is graded with other achievement throughout the four years in a scoring system known as LEAPS (Leadership, enrichment, achievement, participation, service). Co-curricular activities are categorized into two groups.

Uniformed Groups includes NCC (National Cadet Corps), NPCC (National Police Cadet Corps, NCDCC (National Civil Defense Cadet Corps), Red Cross Youth, Singapore Scout Association etc. This group is to prepare students learn drills and wear the respective uniform.

Performing Art including choir, concert, band, symphonic, dance, drama, debate.

TEACHER EDUCATION

There is only one Singapore teacher education that prepares programs of initial teacher which is called the National Institution of Education (NIE). The institution is a part of the Nanyang Technological University. NIE works in partnership with Ministry of Education to develop teacher training program. Requirement for entrance into teacher education, applicants should have university degree or polytechnic diploma with five "O" level and pass the English proficiency. All student teachers are employed by the Ministry of Education and receive salary while undergoing the program. NIE offers a variety of pathways for initial teacher profession such as Diploma of education, Bachelor degree in art BA (Ed), BSC (Ed program) and Post Graduate Diploma in Education for graduate teachers. At present, student teachers who want to become Secondary school teachers generally attend the university before undergoing a one-year Postgraduate Diploma in Education at the NIE to be certified as teachers. Primary School teacher are almost not University graduates. They only undergo a two-year Diploma in Education Program to be certified by NIE as trained teachers.

The NIE policies on the needs to meet a qualified teaching profession are as follow. a) Implementing program that can develop instructional design and teacher classroom management through school-based experiences and practicum. b). preparing student teachers to enable them become teachers who are able to adapt to Singaporean Education Landscape and global trends in education through competitiveness in curriculum design and assessment. c). preparing student teachers to be able to apply innovative information and communication. d). providing pre-and in-service professional development programs to meet the needs of professional teachers who possess skill, knowledge, and good attitude.

SCHOLARSHIP IN SINGAPORE

Like any other nation of the world special scholarships are allotted in Singapore for students to encourage higher education in them. The students who meet the criteria required for receiving the scholarships can apply for the one's that suits their career interests. There are some special scholarships for the students in need of financial assistance and for those with exceptionally good academic background. The site focus Singapore offers detailed information about scholarships in Singapore. The diploma holders and the undergraduates can apply for the PUB Scholarship scheme in Singapore. The scholarship is open for the citizens of Singapore with incredible GCE "O" and "A" Level results. The CCA record has also to be noteworthy. Applicants may choose to study in any of the local university in Singapore or at any of the renowned foreign university. A*Star's National Science Scholarship (NSS) was first started on July 2001. It funds a joint program of undergraduate and also graduate studies. The Maritime and Port Authority of Singapore manages the Joint Postgraduate Maritime Scholarship Scheme (JMSS). It is a scholarship that concentrates on

upgrading the expertise of employees in local maritime related companies for their betterment. Students may even apply for Public Service Commission scholarships to enable the civil service jobs get a good share of the talents of the nation. This certainly meets the demands of the manpower needs in special areas. The other major scholarships awarded in Singapore are Defiance Science and Technology Agency (DSTA) scholarships, Ministry of Defense (MINDEF) scholarship and National Arts Council (NAC) scholarship. Below is a list of institutions in Singapore that offer scholarships to local and international students in the respective programs:

Agency for Science Technology and Research

- o A* STAR Graduate Scholarship

Micron

- o Micron Scholarship

Ministry of Education

- o ASEAN Pre-University Scholarships
- o ASEAN Secondary Scholarships
- o Ministry of Education Teaching Award

National University of Singapore Donated Scholarships

- o NUS Undergraduate Scholarship
- o AEH-EARN Scholarships
- o NUS-CISEE SEP Awards

Nanyang Technological University

- o APEC Scholarship
- o ASEAN Graduate Scholarship
- o Nanyang Fellows Scholarship
- o Nanyang Scholarship
- o NTU-MBA Scholarship
- o Singapore Chinese Chamber of Commerce Foundation Business Scholarship

Singapore Institute of Management

- o SIM International Scholarship

REVIEWING THE POSITIVE ASPECTS OF EDUCATION IN SINGAPORE

The execution of Compulsory of Education Act can be understood as a necessary step to meet the basic right of children of school age to get education. This policy manifests government principle no child is left behind in education even their parents do not have financial capability to send them to school and education is for future success in Singapore. To achieve these aims, the government spends amount of the national budget for financial assistance scheme and subsidizes school fee such as giving scholarship for the students of

families with low income. This financial policy successfully rises the literacy rate up to 94,6% and at the same time the program brings drop-out down sharply.

Singapore's education system has evolved since 1959 from a focus on quantity to quality and from efficiency. For example, since 2004, the education system has practiced classroom interaction, opportunities for expression, and the learning of life-long skill through innovative and effective teaching approaches. This reaffirms the learners – centre. The wide range of level of education equipped with differentiated and flexible curriculum ease the students fit their learning styles and meet what they need to develop long-life skill and prepare them for challenging future. For example, the government establishes special courses, polytechnics as alternatives to junior college for post secondary studies. Apart from this, to accommodate and increase students motivation, the government offers the concept which is called Meritocracy. The program is to promote the bright or clever students for position of leadership.

Language policy results in a unique language situation. Bilingualism brings positive changes in education and social aspects. After much improvement to Bilingualism, the government successfully makes the students be proficient in English and their mother tongue (Pakir, 1998, p 86 in Manfred Wu Man-Fat, 2005). Gopinathan (1980 in Manfred Wu Man-Fat, 2005) points out Bilingualism makes people of Singapore bi-literate in English and other official language (Chinese, Malay, or Tamil) and also increases literacy rate. It is also commonly recognized that the success of economy goes together with bilingual policy. Bilingual policy has been contributing to Singapore's social and political stability as much as nation building (Gopinathan, 1977, 1980 in Manfred Wu Man-Fat, 2005).

CRITICS ON EDUCATION SYSTEM IN SINGAPORE

Tract (streaming), or the separation of students into different categories is a prominent feature in Singapore Education System. The concept of streaming itself is not really new. The United State has attempted to establish the similar concept and met with strong opposition because it is perceived to be unfair and undemocratic. In Singapore streaming becomes a controversial issue. Some people response positively on the implementation but there are also people who oppose the program. According to people who agree with streaming opine that stratification of school standard undergone by the students of Gifted and Integrated programs) is effective. Streaming is to cater best to the needs of each student to his or her academic ability. Streaming is also aimed at preventing best students from being bored by a standard curriculum and the weakest students struggle to pass. Through streaming, the stronger students would be challenged by more rigorous course, whereas the weaker students are given more guidance, more time to learning. This mean streaming allows the appropriate location of time and the right method of the right students and make learning environment more suited to the individual. On the side, people who disagree with streaming state that streaming is too elitist, specialized and rigid. The streaming rises social class stratification where the Gifted students be leaders to whatever field they might enter.

ISSUES RELATED TO LANGUAGE POLICY AND ENGLISH TEACHING

Since the introduction of the bilingualism policy many questions raised. For example, the dominance of English makes people fear of losing of Asian values and emerges cultural gap between generations which speak different language and also the disharmony between the English and Chinese education group. Another critics claims that the government overvalue on the language learning functioning as a tool for the training of logical thinking to achieve the Singapore economy development is excessive demands placed on average students. It is because most students in Singapore are tackling two foreign languages in primary level because most of them speak Chinese at home and Mandarin is used in schools for Chinese lesson. Besides, the government has been using language ability alone as the criterion of differentiating brighter and weaker students. Added to the pressure faced by the students is that conventional oral and written test are applied to judge the students' competence. These ways are against the issue of inequality and linguistic human right in language planning (Skutnabb-Kangas and Philip son, 1994 in Manfred Wu Man-Fat, 2005).The local English teachers has been facing considerable constraints. Local teachers as users of Singapore English do not have the resources to teach socio-linguistic aspect of the external British Standard. They can not meet the students' needs. One possible result is the decrease of learning motivation because they get what they learn is far from their daily lives (Abott, 1989a, in Manfred Wu Man-fat,2005). In relation to English teaching, bilingualism results in the emergence of Singapore English which lacks of attention to the English British Standard. The emerging of Singaporean English has developed its own norms of acceptance and usage and gained mark of nation identity. The localization of English in Singapore raises the students' confusion over accents.

THE REGIONAL LANGUAGE CENTRE (RELC)

The Regional Language Centre (RELC) is a project of the Southeast Asian Ministers of Education Organization (SEAMEO). SEAMEO sponsors a number of regional centers, each focusing on a different area of specialization. The center in Singapore is devoted to language teaching and language teacher education, and has been recognized as a leader in the field of language teaching and teacher education since its inception in 1968. RELC provides members of the SEAMEO organization (Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam) with expertise, training facilities and training programs for upgrading the knowledge and skills of language specialists and educators. It also assists member countries in co-operating on programs, projects, and activities in the interests of improving language education in the region.

RELC offers both full time specialized course for language specialists, as well as tailor made language training courses. Teacher Education courses include the Master of Arts in Applied Linguistics, the Diploma in Applied Linguistics, as well as specialist certificate courses. RELC is located in Orange Grove Road, just minutes from Orchard Road, which is the heart of the tourist belt in Singapore.

Participants in RELC teacher education courses are language teachers and specialists in language teaching from SEAMEO member countries. The courses are residential and full time and bring together a rich mix of faculty and students drawn from member countries as well as other parts of the world.

Professor Richards has had a long association with the Regional Language Centre. In the 1970s, shortly after completing his PhD, he was a specialist in applied linguistics at RELC, sponsored by the New Zealand Ministry of Foreign Affairs. Following an active academic career in a number of Universities in the Asia Pacific Region, in 1997 he returned to RELC and to Singapore (one of his favorite places in the world) to take up an appointment as Adjunct Professor at RELC. From 2006 Dr. Richards is at RELC on an occasional basis, teaching on the Post Graduate Diploma and MA in Applied Linguistics courses.

Dr. Richards serves on the editorial board of RELC Journal (a leading refereed journal of applied linguistics), and is co-editor of an exciting new series of publications recently launched by RELC - the RELC Portfolio Series.

CONCLUSION

Educational system in Singapore is centralized, dynamic, and geared to the needs of the 21st century. The system is under the responsible of Ministry of Education (MOE) and it is designed to response the national needs and international changes. The Singapore Ministry of Education's mission is to mould the future of nation. Schools in Singapore propose to provide students with holistic education develop them to their potentials and nurture them into good citizens, aware of their responsibilities to family, society and country. Focus in the schools is developing the students' cognitive and building their social skills and character through co-curricular activities (CCAs) and enrichment program

The government of Singapore's believes are no child left behind in education and education is a key for future success in Singapore. The Ministry of education is responsible for conducting education policies on the goals, financial support, programmes, decision, law or regulation applied in education in Singapore. The education system in Singapore is comprehensive and concerned with long live education. Education is started from childhood learning continued to learning at higher education level. The completion of each level or stage is prerequisite for access to higher level. The completion in primary level is passing Primary School Leaving Examination, whereas "O" and "A" examination run at secondary or post secondary education.

The variety of programs such as polytechnic, diploma, gifted, integrated program offered to accommodate what students' needs and their learning styles and to bring down the number of drop-out. The education design is aimed to produce human resource power, skill, body of knowledge, and technology. To achieve these purposes, what so called differentiated curriculum has been applied. The curriculum focuses on creative and critical thinking and allows the students with different abilities and learning styles to develop and sustain students' interest in learning. This curriculum emphasis on the outcome rather than input.

In relation to teacher profession, there is an institution working partnership with the Ministry of education (NIE) educates student teachers to become primary and secondary school teachers. To run the effective instructional method and teaching strategies which fit to the brighter and weaker students, Streaming and Meritocracy are put into practice. However, the evidence shows these education disparities among different academic and intellectual learners set up by the ruling party get strong rejection. Apart from this controversy, other issues emerge. The issues relate to the language policy and English teaching. From the view of students, the bilingualism is too excessive burden because the students of primary school are demanded to master two foreign languages. For the English language teachers, since they are the users of Singaporean English, they face difficulties to meet the students' needs because they lack of knowledge of British Standard English. What happen next is the majority of students get confusion in over accent. As the result, the Singaporean English emerges.

Glossary

CCA	: Co-Curriculum Activities
CEA	: Compulsory Education Act
DSTA	: Defense Science and Technology Agency
FAS	: The financial Assistance Schools
ITE	: The Institute of Technical Education
JMSS	: The Joint Postgraduate Maritime Scholarship Scheme
KI	: Knowledge and Inquiry
LEPS	: Leadership, Enrichment, Achievement
MOE	: Ministry of Education
Meritocracy:	Concept, education policy for bright or gifted students
MINDEF	: Ministry of Defense
NAC	: Natural Australian Council
NCC	: National Cadet Corps
NCDCC	: Nation Civil Defense Cadet Corps
NIE	: The National Institution of Education
N-Level	: Normal Level
NPSLE	: National Primary School Leaving Examination
NSS	: National Science and Scholarship
Meritocracy:	Concept, education policy for bright or gifted students
MINDEF	: Ministry of Defense
O-Level	: Ordinary level
REL	: Regional Language Centre
SIM	: Singapore Institute of Management
SEAMEA	: Southeast Asian Minister of Education Organization

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