Country Paper—Singapore
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Student Mobility in Singapore

Background of mobility in the Singapore context

Formal education begins with 6 years of primary education followed by 4 to 5 years of secondary education. Thereafter, the students can proceed to 2 or 3 years of post-secondary education at Junior Colleges (JC), Centralized Institutes (CI), the Institutes of Technical Education (ITE) or Polytechnics.

The 6 years of primary education ends with the Primary School Leaving Examinations. Students will then opt for the secondary schools of their choice, which may be government-aided schools, specialized schools, specialized independent schools or even privately-funded schools. As illustrated in Figure 1, a few routes are available. Students in government/government-aided schools take the GCE 'O' Levels at the end of 4/5 years, depending on whether they are in the special/ express or normal-stream programme.

Figure 2 summarizes the curriculum for the Special/Express course and the Normal (Academic) course. The subject offerings are largely similar, with students usually offering about 7-8 subjects in the GCE 'O" Level exams. However, students in the Normal (A) course need to sit for the 'N' Level exam at the end of four years that serves as a qualifying exam into the fifth year of study (when they will sit for the GCE 'O' Levels). Also, the third language option differs. Students in the N (A) stream are only entitled to choose either Chinese or Malay to study as a third language while students in the Special/Express stream can choose from French, German, Japanese, Malay or Chinese.

Students in the Normal (Technical) course, on the other hand, offer 5 -7 subjects in the GCE 'N' Level examinations. As the course name suggests, the curriculum adopts a vocational focus and prepares students for a technical-vocation education at the Institute of Technical Education. This curriculum is also geared towards strengthening students' proficiency in English and Mathematics with students taking English Language, Mathematics, Basic Mother Tongue and Computer Applications as compulsory subjects.

Apart from the schools offering the 4/5 year course structure, students can opt for schools which offer the Integrated Programme (IP). These schools combine secondary and JC education together, and it may either be a 4 year or a 6 year course. Students proceed directly to take the GCE 'A' Level exams. For schools which offer the 4 year IP, students from schools offering the typical O Level track can apply for entry into the programme at the end of secondary two.

Alternatively, specialized independent schools are available for students who wish to follow a more specialized curriculum for certain subjects rather than the typical 'O' level curriculum. An example is NUS High which offers a 6-year programme with an emphasis on Mathematical and Scientific training. There are also schools that cater to niche interests and abilities. These schools allow the development of unique skills and talents. For example, the School of the Arts (SOTA) offers a 6 years arts-and-academics connected programme while the Singapore Sports School aims to develop academic abilities while promoting success in sports. For students who want a more arts-based education, Nanyang Academy for Fine Arts (NAFA) and LASALLE are two institutions they can consider. Both offer a wide range of design, media, fine arts and performing arts courses. Upon graduation from the diploma programmes, they can further their studies by pursuing a degree programme from NAFA, LASALLE or overseas institutions.

On the other hand, students who can benefit more from a hands-on and practical approach to learning can proceed to Northlight School and Assumption Pathway School. These schools offer programmes that are more customized to a hands-on learning style, which will then address the social and emotional needs of the students. Upon graduation, students would have gained sufficient skills to be able to seek employment in industry sectors. Alternatively, they can choose to further their studies in ITEs.

Students who have taken the O Levels will then proceed to post-secondary education. The JC curriculum takes 2 years and is meant to equip students with the essential skills and knowledge required for tertiary education. Subject combinations are offered at three levels of study: Higher 1 (H1), Higher 2 (H2) and Higher 3 (H3). H1 is similar to the AO level offered previously, a difference being the greater variety of subjects available now. Subjects at H2 are designed to provide foundational knowledge and skills that will support the curriculum in the university. On the other hand, subjects offered at H3 allows for more in-depth learning and research than the previous 'S' papers. In addition to the focus on thinking and communication skills in the JC/CI structure, there is also an emphasis on life skills and knowledge skills. JCs and CIs offer a wide variety of special elective programmes and cross-curricular activities (CCA)—from art, music, drama to languages and the humanities—that caters to the individual's special interest. At the end of their studies, students take the GCE 'A' level examinations to obtain the GCE 'A' Level certificate which is often a pre-requisite for entries into both local and overseas universities.

On the other hand, students who have opted for the ITE will be trained to acquire competency in the technical skills and knowledge to meet the workforce needs of the various industry sectors. From Hospitality to Food Science to Aerospace to Beauty, students will be engaged in a series of partnerships with key industry players to get a taste of what working life has in store. ITE graduates who are keen to further their education can apply to the polytechnics for consideration.

The polytechnic is also popular with students who want a hands-on curriculum in their post-secondary education. The courses offered are usually more market-driven and career-oriented, with the emphasis being on practice-based learning. Work attachments typically last 6 to 8 weeks although it can also go up to 6 months depending on the course. As they are tied up with industry partners, they are excellent opportunities for students to work alongside with the experts while gaining valuable on-the-job experience. At the end of three years, students graduate with a wealth of hands-on experience which will greatly ease their entry into the workforce. On the other hand, they can also opt to further their studies in the university or an institute of higher learning with the diploma they have earned.

Following post-secondary education, students from JCs/CIs or Polytechnics may proceed to study at the local universities if they qualify. They have a choice of three public universities—National University of Singapore, National Technological University and Singapore Management University. Alternatively, they students can also choose to further their studies in SIM University, which is a private university offering degree programmes recognized by the Ministry of Education.

Alternative pathways of mobility are also available for students who have special needs. Having sat for the PSLE, they can leave the Special Education Schools to continue their education in mainstream secondary schools if they do well. Various schools are available for students with different needs. For example, hearing-impaired students who communicate using sign language can either attend Balestier Hill Secondary School or Boon Lay Secondary School. Visually-handicapped students can attend Ahmad Ibrahim Secondary School, Bedok South Secondary School, Clementi Woods Secondary School or Dunearn Secondary School. Students who are unable to continue their education in secondary schools

will proceed to one of the training centres or workshops run by voluntary welfare organizations to equip themselves with the necessary skills to seek employment.

Present development, experiences and updates

Primary School education

As of now, compulsory education is enforced up to Primary Six. Statistics in 2008 indicated that 1.5% of the P1 cohort did not complete secondary education while 25% successfully gained admission into local publicly-funded universities. The primary school is an important period to cultivate interest in learning, which will have an impact on student upward mobility in later years. As such, some initiatives have been set with regard to this agenda:

a) The incorporation of non-academic programmes such as sports and the performing and visual arts as part of the main curriculum for Primary 1 and 2

There is a shift in the focus of education: that education being not merely as a feeder of academic content, but rather, as a tool to enrich students with skills, values and experiences needed to thrive in a fast-changing world. 12 schools will take the lead in 2010 in this move. Also part of this initiative is the implementation of the Programme for School-Based Excellence, which is meant to raise the quality and outreach of school programmes. In this Programme, schools can apply a grant for areas such as developing new approaches or pedagogies or in areas of aesthetics or in areas that foster character development.

b) The implementation of subject-based banding to provide students with differentiated learning experiences

Primary schools will now have subject-based banding for students in the EM3 stream which used to be offered the Foundation level for all subjects. With this scheme, students will be offered a mix of Standard or Foundation subjects depending on their aptitude in the subject. This implies that, if a student is only weak in English and Science, he can choose to only take English and Science at the Foundation level while taking Mother Tongue language and Mathematics at the standard level. The scheme is aimed at providing students with customized and differentiated learning experiences so as to realize their potential in other subjects.

Transitional phase (from Primary school to secondary school; to postsecondary)

Updates are also in place to facilitate student mobility during the transition from primary school to secondary school. Following the release of the results for the PSLE, students will have an opportunity to indicate their choice of six secondary schools. Previously, the Ministry of Education was the central board for secondary school admissions, with posting based on merit and choice. As of now, more schools have been given partial/full discretion with regard to student admissions. This is done in order to allow schools to have greater flexibility to recognize a more diverse range of talents and achievements. For example, secondary schools with IP have full discretion in student admissions while autonomous and independent schools are entitled to set aside 10% and 20% of their school vacancies respectively for discretionary admission. Just this year, over 2000 students from 155 primary schools (90%) were successful in gaining admissions in the direct schools admissions (DSA) process based on their talents in the different fields. Also, schools with approved niches of excellence (athletics, dance, sports) can set aside 5% of their

school vacancies for discretionary admission and this is targeted at encouraging students to put in more effort in the activities that they have special interest and talent in. All JCs have also been given discretion on student admissions. This would imply that grades may not be the only deciding factor in student admissions.

Secondary school education

Changes have also been incorporated within the secondary school structure to ignite student interest and arouse their curiosity so as to facilitate mobility in the later course, and they are namely,

a) The introduction of new programmes

Two new programmes that were started recently in selected secondary schools and junior colleges are the IP and Bicultural Studies Programme. The former is catered to those who wish to pursue greater breadth in the academic and non-academic curriculum with an integrated upper secondary and JC education while the latter is targeted towards students who are not only highly competent in the Chinese language but also have a strong understanding of China's history, culture and contemporary development.

b) The introduction of new 'O' Level subjects, elective modules and alternative curricula

Aimed at giving students who have the interest and aptitude in the relevant fields of study a greater choice of studies, new 'O' Level subjects are being offered at the various levels. For example, Computer Studies and Economics are offered at Secondary 3 while schools can offer Drama studies at Secondary 1 and/or 2. Alternatively, schools may even offer new subjects to cater to different learning styles. In fact, 3 schools have implemented new courses to cater to students in the Normal Technical course—Computer & Networking (Siling Secondary); Electrical Technology & Applications (Bedok Town Sec.); Mobile Robotics (Shuqun Sec.). Collaboratively developed by ITE and MOE, the new elective subjects can be taken by students at the N Levels for progression to the ITE. Also aimed at fostering diversity in the education system is the institution of the International Baccalaureate, which is currently offered only by Anglo-Chinese School (independent).

c) The set-up of specialized schools following the typical academic curriculum

Specialized schools such as the Singapore Sports School, the NUS High School for Mathematics and Science and the School of the Arts were all set up with the intention of providing an all-rounded education to students who may have exceptional talent and abilities in particular areas. However, despite being trained in specialized niches, they are also schooled in the typical academic curriculum. This provides them with more choices on the academic pathway. As of now, students at the Singapore Sports School undergo a modular study curriculum to prepare for the O Levels. Starting from next year, the school will offer a six- or seven-year pathway leading to a university qualification examination such as the International Baccalaureate Diploma Programme.

d) Greater flexibility in streaming

As illustrated by Figure 3, there is lateral mobility as well as upward mobility during the secondary school years. Students can move from one course to another based on their performance and assessment from principals and teachers. The changes are especially pertinent for students in the Normal stream. They now have more flexibility to take a few subjects at a higher level or faster pace, or even transfer to another course when they show that they have the ability to benefit from them. Schools also have the

option to allow their top Normal (Academic) students to progress to Secondary 5 without taking the 'N' Level examinations. Alternatively, qualifying Sec 4 N (A) students can proceed to the ITE which has piloted a new pathway to the Higher Nitec courses. Instead of spending another year to sit for the O Levels, they can obtain an ITE qualification earlier. The first intake of last year saw 360 successfully complete their first semester at ITE.

Post-secondary education

Updates are also available on the post-secondary education scene. These include:

a) The building of a fourth university

The fourth university, due to open in 2011, will tie up with the Massachusetts Institute of Technology and a top Chinese University (to be announced at the end of the year) to offer courses in health science, architecture, engineering, information systems and other applied fields. The partnership of the new university is targeted at the globalized economy in which new institutions will help bring diversity as well as quality in course offerings, teaching staff and the student body. It is hoped that the international partnership will take the innovative trend to a new level. At the same time, it is also aimed to increase the proportion of each cohort entering the public Universities from the present 25% to 30% in 2015.

b) The implementation of new courses

New courses are continually being developed by local institutions to cater to students with diversified interests. For example, a new sports degree launched by NTU aims to produce qualified professionals to support the growth of the local sports industry. Students in the programme will undergo a core curriculum in sport and exercise science during the first two years before specializing in either sports science or sports management. Another newly launched partnership is between the Maritime and Port Authority of Singapore with various educational institutions to establish new maritime courses, such as NTU's degree in Maritime studies, and Ngee Ann Polytechnic's diploma in architecture diploma. Other new course offerings include ITE's implementation of 11 new courses this year, due to take in 1,200 students. Some of the new courses are Leisure and Travel operations, Aerospace Machining Technology and Medical Manufacturing Technology. As of now, ITE students have a choice of 73 courses, compared to 25 more than 10 years ago. Students are no longer confined to courses on engineering and electronics but instead, are offered a variety of courses from paramedics to aerospace to culinary to nursing, which are all equipped with a specific pedagogy and are industrially relevant.

c) Increasing the enrolment of polytechnics

With the increasing demand for a polytechnic education, there is plan to increase the number of places available at the five polytechnics by 700. This would mean that the total number of places available in 2009 would be 25,700, catering for 42.5% of the cohort.

Future roadmap for enhancing student flows and mobility in Singapore

a) Increasing the number of foreign universities that run degree courses as well as the type of courses available

A new body, the Singapore Institute of Applied Technology (SIAT), will be set up to plan, manage and implement degree courses in a wide range of disciplines. The courses are an initiative targeted at helping students upgrade their academic qualifications after the diploma and will be conducted in partnership with Singapore's five polytechnics. This move is targeted at increasing the number of number of polytechnic students gaining admission into universities. Currently, 15 per cent of polytechnic students proceed to further their studies in one of the three local universities as compared to 70 per cent of A-level holders. It is hoped that the number of foreign universities offering two-year degree courses can increase to about 10, which will then open up another 2000 full-time spaces for polytechnic graduates, and 1500 spaces for those who want to study part-time and consequently increase the percentage to 20%. The Education Ministry endeavours to provide a differentiated university track for polytechnic students—one that is hands-on, practice-oriented and geared to problem-solving. This will help achieve Singapore's desire for a 'mountain range of talents'. Top universities which the government hopes to attract to offer their degree programmes to polytechnic graduates are the Swiss hotel schools, members of the Russell Group Universities in the UK and the Australian Group of Eight universities.

A new framework has been started for polytechnic students to proceed to degree courses in niche areas with an industry-oriented focus. This year, 300 students were admitted into the six degree programmes—Early Childhood Education, Retail Management, Naval Architecture, Food Technology, Creative Producing and Optometry. There are plans to double the places to 700 over the next few years.

b) More schools with specialized niches to be opened

A new specialized independent school which will offer Secondary one to four curriculum, is set to open next year. Catering to those with talents in applied learning, the new School of Science and Technology (SST) will teach regular academic subjects in preparation for the O Levels and yet offer courses that are more hands-on, covering business skills, with innovation and entrepreneurship. At the upper secondary levels, students will be given the opportunity to study subjects such as media studies, environmental science, technology and biotechnology.

Role of Singapore in promoting mobility within Southeast Asia

1) Extensively engage in country showcases with Southeast Asian counterparts

A recent study tour to the Philippines, organized by a Filipino student pursuing his MBA in NUS, was aimed at giving fellow postgraduate students a holistic insight into the Filipino business and economic climate in the hope of promoting a better understanding of the country (*The Business Times*, Jun 22 2009). During the tour, the participants were also briefed on which companies to engage, how to approach them and the agenda to set for each company visit. This could be the protocol for future educational trips between Singapore and her Southeast Asian counterparts.

2) Continue to play host to international students from Southeast Asian counterparts

In 2008, Singapore hosted 97,000 international students from more than 120 countries. Among them, Indonesia, Malaysia, Myanmar and Vietnam were among the top sources. On a collective note, tourists from Southeast Asia accounted for a third of Singapore's total visitor arrivals of 10 million in 2008. Students from other parts of Southeast Asia opt for Singapore as a place to study because of its rigourous and comprehensive education system. Through these human-to-human linkages, the region can better realize the creation of a truly ASEAN community by 2015.

3) Continue to actively support of SEAMEO Community Involvement projects

One of the SEAMEO community involvement projects which saw Singapore's active participation was the adoption of Ban Prue Primary School in 1997, which was meant to promote the SEAMEO Sister School Network Project. The project was later renamed SEAMEO Regional Schools Internet Project. This project had two aims, firstly, to link schools in the SEAMEO countries via the Internet; secondly, to provide opportunities for exchange of information in English. Together with Singapore, other countries that received in-country training were Indonesia, Thailand, the Philippines, Malaysia and Brunei. Singapore would continue to take on an active role in supporting/ participating in SEAMEO community involvement projects.

4) Continue to play a proactive role in enhancing student/expertise exchanges between Singapore and Southeast Asian counterparts

Currently, the different tertiary institutions in Singapore offer exchange programmes to institutions and internship stints to companies in Southeast Asian countries. For example, the academic year 2008/09 saw about 2000 students from the various polytechnics heading for internship in the region. In contrast, the numbers heading to Singapore were smaller, standing less than 100. Hence, one way which Singapore can promote mobility would be in terms of providing more internship positions to students from SEAsia.

Also, SEAMEO undertakes projects in a variety of sectors, among which education is one of them. For example, there is the teaching capacity building programme as well as the improvement of school facilities initiative. There are also training centres catering to specific disciplines set up in different SEA countries. Singapore for instance, houses the SEAMEO Regional Language Centre (SEAMEO RELC) which conducts an annual conference for participants in the region and all over the world. On the role of Singapore in promoting mobility within Southeast Asia then, Singapore could continue to play an active role in enhancing such interactions.

Conclusion

Singapore's education system has been changing over the years. As of now, we are moving towards a system that is more individualized and diverse, so as to be able to cater to the changing profiles of the learner as well as the changing expectations of society. We want to provide mobility pathways that will enable our young to nurture their own talents and skills that will be useful for the future. We want to provide an environment for our young to think in new ways and create new opportunities for the future.

As much as Singapore strives to create a nurturing environment for our young, we endeavour to pledge the same effort in SEAMEO. Currently, we are looking into enhancing student exchanges between Singapore and the region. We will look into increasing the number of SEAsia students in Singapore, and at the same time, we hope to create more opportunities for our students to head for SEAsia countries for internships or academic exchange programmes.

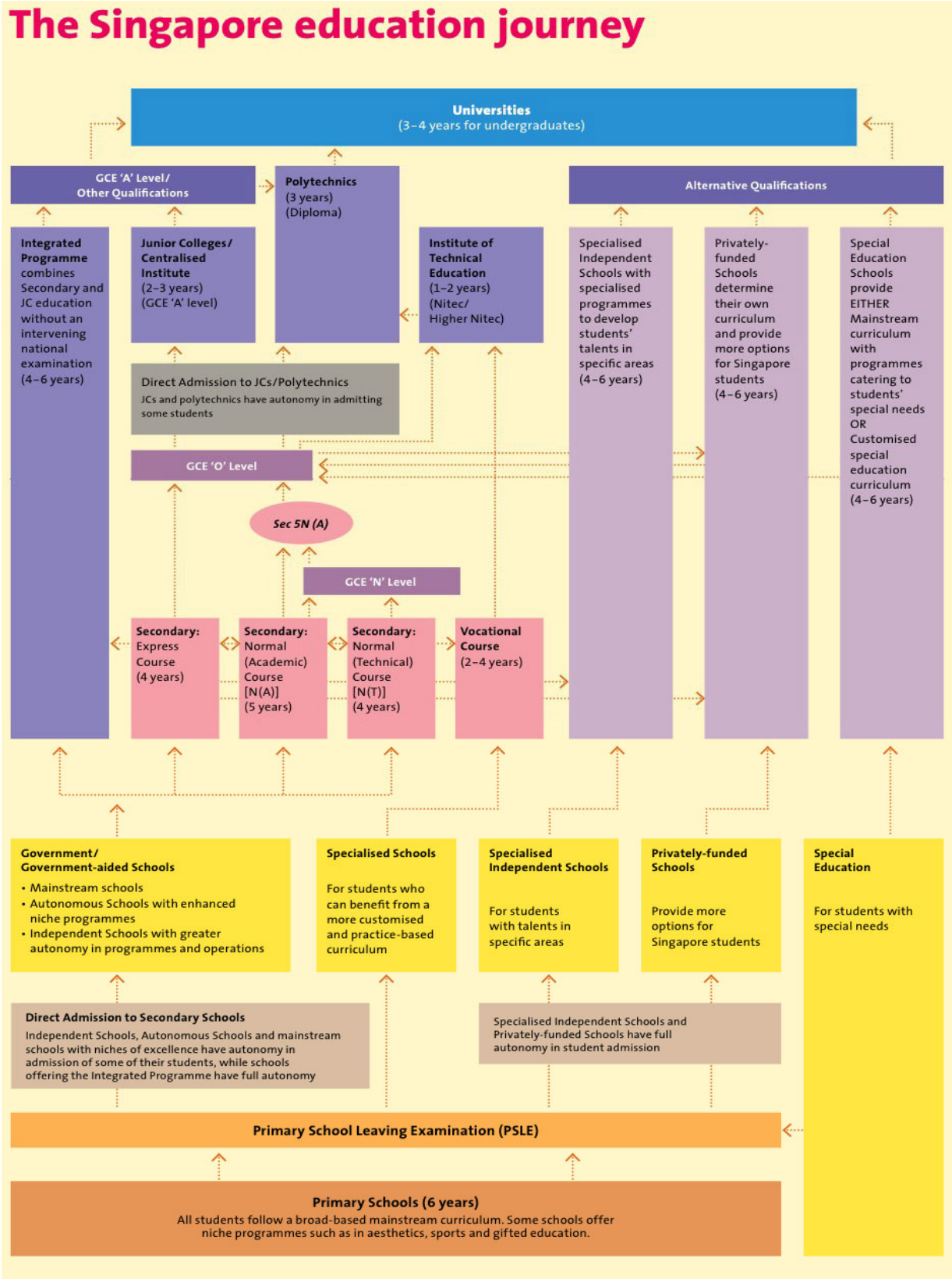

Figure 1: Structure of the Education System in Singapore (Ministry of Education Singapore, 2009)

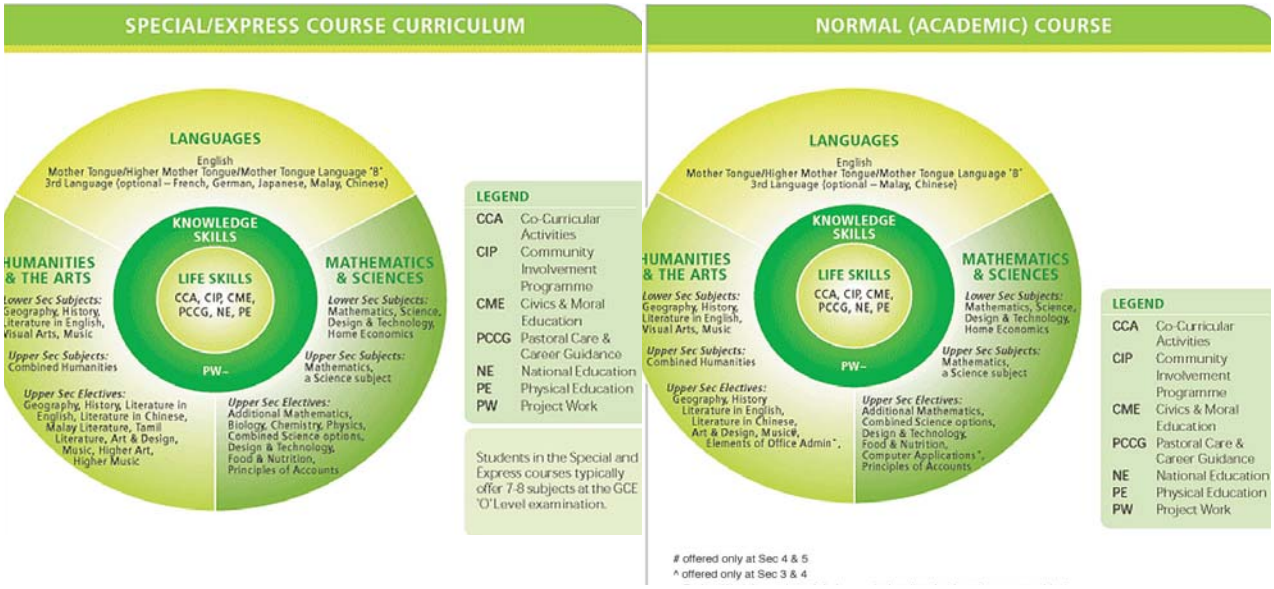

Figure 2: A summary of the curriculum for the Special/Express course and the Normal (Academic) course (Ministry of Education Singapore, 2009)

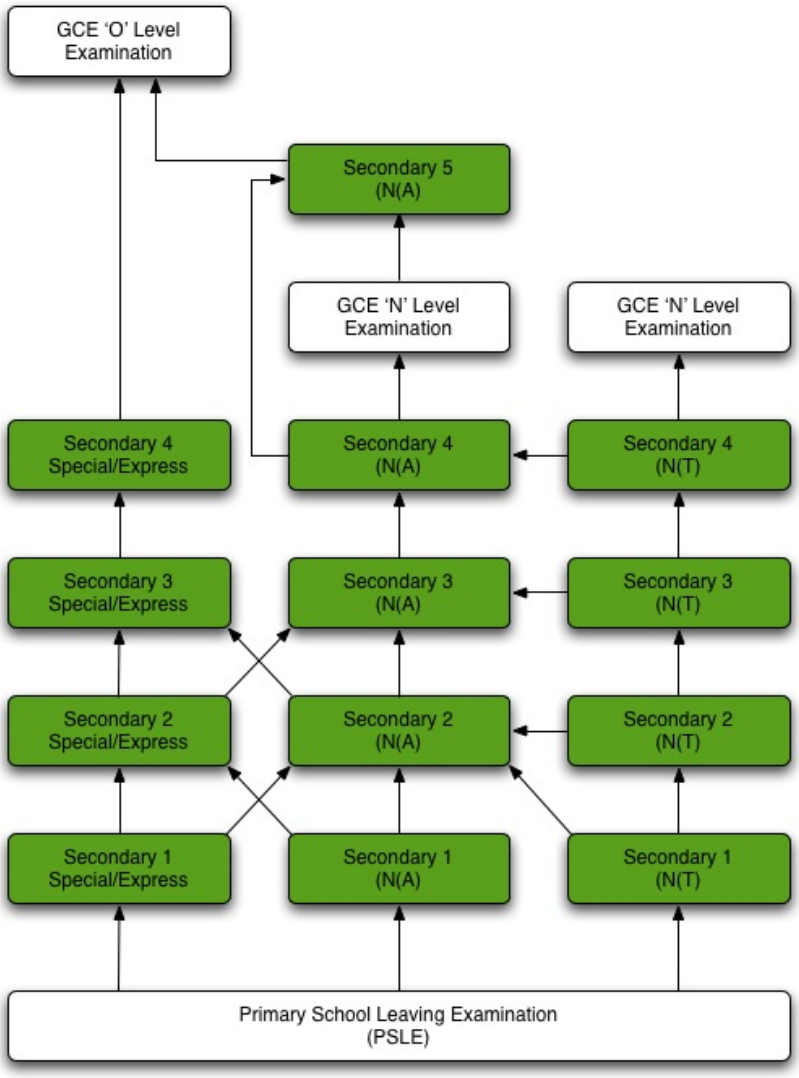

Figure 3: Pathways in the Secondary School system following the PSLE (Ministry of Education Singapore, 2009)