



# PRESS RELEASE

Ministry of Education

27 Sep 06

## REFINING HOW WE DELIVER ABILITY-DRIVEN EDUCATION

1. The Ministry of Education and schools will be making refinements to how we deliver ability-driven education in primary schools. Schools will introduce subject-based banding to replace the current EM3 stream. There will also be new programmes to provide enriching learning experiences for high-ability students at the primary school level, and to allow for greater integration between Gifted Education Programme (GEP) students with others.
2. These refinements are being introduced to take us further in providing students with customised and differentiated learning experiences, so as to realise their potential, while enhancing opportunities for interaction among students.
3. Ability-driven education has been a key feature behind Singapore's success in education. The introduction of streaming in the late 1970s to cater to students with different abilities and learning styles brought drop-out rates down sharply and allowed many more students to stay engaged in their learning. Various refinements have been made over the years. In recent years, these have included the removal of the distinction between EM1 and EM2 streams, and the integration of EM3 students with other students in their non-academic subjects in most schools. In secondary schools, more opportunities for Normal (Academic) and Normal (Technical) students to be transferred across courses or take selective subjects at a more advanced level have also been introduced.
4. The following further refinements were announced by Mr Tharman Shanmugaratham, Minister for Education, at the MOE Work Plan Seminar on 28 Sep 2006.

### **(A) Subject-Based Banding**

5. Primary schools will introduce **Subject-based Banding starting from the 2008 Primary 5 cohort, replacing the current EM3 stream.** With Subject-based Banding, students will be able to offer a mix of Standard or Foundation subjects depending on their aptitude in each subject, rather than have to opt for the EM3 stream comprising the Foundation level for all subjects. For instance, if a student is weak in English and Mathematics, he can choose to take English and Mathematics at the Foundation level while taking Mother Tongue Language (MTL) and Science at the Standard level.
6. Schools will work out class and timetabling arrangements that allow students to take separate classes in Foundation subjects while being integrated with other students for the rest of the curriculum. We expect that many students who would be in the EM3

stream under the current system will be spending about half their curriculum time with the rest of their classmates in their regular classes.

7. Subject-based Banding would benefit a group of students who under the current arrangement would have been **in the EM3 stream, but have specific strengths in one or more subjects**.<sup>1</sup> Currently, 40% of EM3 students pass at least one subject in their Primary 4 examinations. They would benefit from being given the opportunity to offer these subjects at the Standard level, together with other students taking these subjects.

8. Subject-based Banding would also benefit those students who under the current arrangement are **in the merged stream<sup>2</sup> but have considerable difficulties coping with some subjects at the Standard level**. Some of these students are currently transferred to the EM3 stream after Primary 5, to enable them to consolidate their learning before the PSLE. Under the new subject-based banding framework, students who are unable to cope with the Standard curriculum can opt to take some subjects at the Foundation level. Taking their weak subjects at the Foundation level will allow these students to have a better grasp of the fundamentals, and will prepare them for progression to secondary school.

9. Schools will advise students to offer Foundation subjects where they face difficulties in two or more subjects. Students who are weak in only one subject will be encouraged to offer all subjects at the Standard level, and to work on improving their weak subject. At the end of Primary 4, **schools will advise their students on the subject combinations that are best suited to their abilities**. Parents and students will choose the combinations they prefer.

10. The Singapore Examinations and Assessment Board (SEAB) will put in place a method of computing the PSLE aggregate for students who take a mix of Standard and Foundation subjects. (This would build on the current system for computing the PSLE aggregate for EM3 students who take MTL at the Standard level and other subjects at the Foundation level.) The **computation of subject scores will be fair and equitable**, commensurate with the different demands of Standard and Foundation-level subjects. To allow sufficient time to work out the detailed subject combinations and make the necessary adjustments in schools, Subject-based Banding will be implemented from the 2008 Primary 5 cohort.

## **(B) *Enriching Learning Experiences for High-Ability Students***

### ***Greater Integration of Students in the Gifted Education Programme***

11. Established in 1984, the GEP caters to the top 1% of our students. The programme provides an enriched curriculum to nurture these intellectually gifted students. It develops their skills in critical and creative thinking and allows them to work with specialists through mentorship programmes.

12. Gifted education remains **an integral element of Singapore education, from the primary to secondary levels**. At the primary level, the GEP students will continue to be placed in GEP Centres after Primary 3, as they are widely distributed in schools across Singapore when they first enter primary schools. At the secondary level, GEP

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<sup>1</sup> Since 2005, schools have allowed some students to take MTL at the Standard level. With Subject-based Banding, this will allow any subject to be taken at the Standard level.

<sup>2</sup> The distinction between EM1 and EM2 was removed in 2004, to form the merged stream.

students can opt for schools offering the Integrated Programme (IP), which have developed their own distinct programmes for gifted students.

13. MOE has therefore devolved the secondary gifted programme to the IP schools, and will be supporting them in these programmes. This approach ensures **greater diversity in our gifted programmes**, and also allows the IP schools to include other students with special talents in their programmes to develop gifted students.

14. MOE and the Primary GEP centres will make refinements to the Gifted Education Programme to achieve the best balance between stretching the potential of the students and integrating them with other students so as to promote their all-round development.

15. Schools will create more opportunities for GEP students to interact with their non-GEP schoolmates, in both the non-academic and academic curriculum.

16. In the non-academic curriculum, GEP and non-GEP students will henceforth participate together in **joint Community Involvement Programmes**. Schools will also encourage GEP students to join **Co-Curricular Activities** that promote physical activity and teamwork, e.g. outdoor programmes and sports, so as to enhance their all-round development.

17. We will also explore possibilities for greater **integration of students in their academic curriculum** so as to maximise opportunities for GEP students to interact with others at a young age. Two schools will be introducing their own innovations to the GEP, and will be supported by MOE in their initiatives: :

- Nan Hua Primary School will be piloting the integration of classes for its GEP and high ability non-GEP students for about 50% of their curriculum, starting from the Primary 4 cohort in 2007. The GEP students will continue to take separate classes in English, Maths and Science. (See Annex A for write-up). The integrated classes will have about 30 students per class, while the GEP classes in the core academic subjects will have 20 students per class (compared to 25 students per class currently).
- Tao Nan School will be introducing an integration model through a pilot bicultural programme (BICEP) starting from the Primary 4 cohort in 2007. GEP students can choose to join high ability non-GEP students in two BICEP classes for about 50% of their curriculum. The GEP students will continue to have separate classes in English, Maths and Science. (See Annex B for write-up).

#### *Developing Non-GEP Students with High Ability in Specific Areas*

18. Starting from the Primary 4 students in 2007, **students who are not in the GEP who have demonstrated high ability in a specific area**, e.g. Mathematics, can benefit from more enriching lessons and provisions beyond the curriculum in the specific academic area. These high-ability students, while not in the GEP, will be given the opportunity to achieve as high a level as possible in their areas of talent.

19. Drawing from more than 20 years' experience built up in Gifted Education, the Ministry will extend gifted educational services to students who show potential in specific academic areas. This new initiative is expected to benefit an additional 1,500 students in each cohort.

20. MOE will assist schools in the identification of these high-ability students, who currently tend to be more widely distributed across schools at the primary level. With appropriate guidance, many of these high-ability students can aspire to levels of excellence beyond what is expected in national examinations, e.g. participation in Mathematics Olympiad, Language Arts Fests.

21. MOE will work with National Institute of Education (NIE) to train new and existing teachers in developing innovative teaching strategies and various ways to develop students' potential and talents. MOE will also support trained teachers with consultancy services and teaching materials.

22. The implementation of the school-based initiatives to nurture high-ability students will depend on individual schools' readiness. Schools that are ready can begin doing so in 2007. Support will also be provided for ground-up initiatives at school cluster level. Such initiatives could include enrichment classes that take place outside of school curriculum time.

23. In addition, MOE's Gifted Education Branch will run common programmes, such as a Language Arts Fest and a Math Carnival that can cater to a large number of high ability students. (See Annex C for write-up) These platforms, to be run from 2007, will provide opportunities for these students to interact with others who share similar passions and allow them to showcase their talents.

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**MINISTRY OF EDUCATION**

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Nan Hua Primary School's pilot programme

Nan Hua Primary School, a primary GEP Centre, will be introducing a pilot twinning model for its GEP students starting from the Primary 4 cohort in 2007.

As an alternative to full-time, self-contained classes for GEP students, each class will be 'topped up' with high-ability mainstream students. Instead of being placed in two to three GEP-only classes, GEP students would be placed in four mixed classes of GEP and non-GEP students, of about 30 students each.

GEP students would be pulled out during curriculum time for English, Maths and Science. These pull-out classes will comprise 20 students each. They could also include some non-GEP students who have exceptional abilities in those specific subject areas. For other classes, the GEP students would remain in their combined form class for PE, Music, Art & Crafts, Civics and Moral Education, Individualized Research Study, Social Studies and Higher Chinese.

This would mean that GEP students would spend about half the curriculum time with their non-GEP peers on a daily basis.

Tao Nan School's pilot bicultural programme

Tao Nan School, a primary GEP centre, will be introducing an integration model for GEP and non-GEP students through a pilot bicultural programme (BICEP) starting from the Primary 4 cohort in 2007.

GEP students will be invited to apply for the pilot bicultural programme. Instead of being placed in typical GEP-only classes, the 25 selected GEP students will be placed in two GEP-BICEP classes, together with high-ability mainstream students who are interested in the BICEP. The two mixed classes will have a class size of 25. The rest of the GEP students will be placed in GEP-only classes.

GEP students in the two GEP-BICEP classes will be pulled out during curriculum time for English, Mathematics and Science, in a class of 25. For other classes, the GEP students would remain in their combined GEP-BICEP classes.

This would mean that the 25 GEP students in the GEP-BICEP classes would spend about half of the curriculum time with their non-GEP peers on a daily basis.

Language Arts Fest (May 2007)

MOE's Gifted Education Branch will organise a Language Arts Fest in the first half of 2007 for about 1,000 Primary 4 students. This one-day event will feature language-related games, an exhibition of students' works, mini-workshops, and performances. It will allow students to find out more about their interest in the verbal arts, and enhance their language learning.

As a follow-up to the Language Arts Fest, relevant workshops and activities can be organised for teachers and students to develop their knowledge and skills in their interest areas. MOE's Gifted Education Branch hopes to engage IP schools, the polytechnics, as well as other agencies such as the National Library Board and Singapore Press Holdings as collaborators.

Math Carnival (Nov 2007)

MOE's Gifted Education Branch plans to hold a Math Carnival in the 4 school zones, each catering to about 400 top Primary 4 mathematics students. This is aimed to introduce students to mathematics beyond the classroom, and to excite them about how beautiful, fun, dynamic and relevant mathematics is. The NUS High School will be co-hosting the inaugural carnival. In subsequent years, other IP schools could be invited as collaborators.

There are also plans to hold a Math Trail in 2008 for 1,000 top Primary 5 Mathematics students, as well as to help interested schools set up Math Clubs. This year, the NUS High School, Singapore Mathematical Society and MOE's Gifted Education Branch have organised the National Math Olympiad for Primary Schools (for students age 11 and below).