Progress Report on the New Academic Structure Review

The New Senior Secondary Learning Journey – Moving Forward to Excel

Extended version

Curriculum Development Council
Hong Kong Examinations and Assessment Authority
Education Bureau, The Government of the Hong Kong Special Administrative Region of the People’s Republic of China

October 2013
Preamble

In April 2013, the Education Bureau, the Curriculum Development Council and the Hong Kong Examinations and Assessment Authority shared with the public the first outcomes of the New Academic Structure (NAS) Review.

We published the findings of the various evaluation studies of the New Senior Secondary (NSS) curriculum and assessment and the NAS. We shared with our parents and key stakeholders the smooth implementation of the reform and, in response to feedback shared by schools during the review, acknowledged the challenges to be addressed.

As a result, we announced the next steps in the fine-tuning of the curriculum, assessment and support measures for schools to further improve the new system. With agreement on the way forward, schools have time to prepare for the fine-tuning that will be phased in from the coming academic year.

Review of such a major reform is an on-going process, with valuable data gathered and analysed on a regular basis. As such, we are now publishing an extended version of the report, for education professionals.

This report includes further data that confirms the early successes but also indentifies the areas for development in the reform journey, at system level as well as in schools’ practices.

One of the key aims of the new structure is to extend education opportunities by enabling all students to complete the NSS and by developing multiple pathways for all to progress to further studies. However, catering for diversity also poses the greatest challenge for schools, from curriculum planning to classroom practice and in managing the assessment. The heavy workload involved for our dedicated teachers has been identified as an added obstacle that needs to be addressed.

This report provides additional data to enable everyone to understand more deeply the achievements, progress and challenges that have informed the fine-tuning at the system level. By looking in detail, schools and other professionals who work with them can reflect on their practices and together strive for continuous improvements, with the ultimate goal that all students can improve and enjoy their learning.

October 2013
A MESSAGE FROM THE SECRETARY FOR EDUCATION

Hong Kong has every reason to celebrate the initial success of its education system and ambitious, system-wide reforms. 2012 was a key year for the New Academic Structure (NAS), when the first Secondary 6 students studying the New Senior Secondary (NSS) curriculum completed the Hong Kong Diploma of Secondary Education (HKDSE) Examination and continued their learning journey through multiple pathways.

This moment was the culmination of more than a decade of carefully planned reforms, phased in since 2000 when the Hong Kong Special Administrative Region Government accepted the Education Commission’s recommendations for fundamental system-wide change. Students’ best interests have been the primary concern throughout.

The NSS curriculum and assessment introduced in the 2009/10 school year build on the existing strengths of Hong Kong education, as well as the achievements of curriculum reform at basic education level. The aim is to improve learning, expand education opportunities, and unleash the potential of all students to learn and succeed. Whole-person development and life-long learning are promoted through the broad and balanced curriculum, which includes Other Learning Experiences for all to balance academic learning. And unlike those in the old model, all students now completing secondary school can further their studies, through multiple pathways.

I offer my wholehearted thanks to our professional and highly dedicated teachers, who have worked tirelessly to implement the new curriculum and assessment, as well as new approaches to learning and teaching. Without this, successful change would not have been possible.

I also wish to thank all other stakeholders – parents, tertiary educators, employers and, not least, the first cohort of NSS students, who so bravely and successfully paved the way for generations to follow.

Managing such fundamental change has required close communication among the Government, schools, parents, post-secondary and tertiary institutions, overseas governments and agencies, and the wider community. It is important that the Government listens to the views of all so that the new system and structure can be fine-tuned for even better outcomes for our students.

We have gathered data to evaluate the NSS and NAS since 2009/10, and have listened to feedback so that improvements can continuously be made. Since June 2012, we have also embarked on a systematic review of the NSS and HKDSE, which we now report on. I wish to thank the thousands of stakeholders who have contributed to this progress report by sharing their views.
Based on the feedback received, the Education Bureau is now ready to take the next steps to further improve the system, focusing on the learning needs of all students. Recommendations for change will now be implemented over the short and medium term, while views will continue to be sought on further changes in the longer term.

Eddie Ng Hak-kim, SBS, JP
Secretary for Education
A MESSAGE FROM THE CHAIRMAN OF THE CURRICULUM DEVELOPMENT COUNCIL

This is an important moment in the history of education in Hong Kong when, after years of collaboration across the education sector, we can now say that the New Senior Secondary (NSS) curriculum and assessment have been implemented.

The NSS involves more than a new curriculum. It embraces the fundamental changes in learning and teaching that we believe all students should benefit from, supported by and aligned with changes in the public assessment, as well as wider curriculum changes in the primary and junior secondary years.

Apart from helping students develop a sound knowledge base, the NSS should offer them the experiences that instill in them the attitudes and values to enrich their own lives and that of the wider society, a more global outlook, and the skills that equip them for life-long learning.

As we see in this review, significant changes are taking place in our schools in both the content of education and how it is delivered. But these are early days, which require continuous reflection and improvement of the new system. The Curriculum Development Council will continue to monitor the learning outcomes of the NSS, listen to the views of all stakeholders, and be ready to make improvements. As such, this review receives my whole-hearted support.

The implementation of the NSS is the result of many people from across the education sector working together, with the utmost professionalism, care and diligence. I wish to extend my sincere thanks to all those involved, in particular Members of the Curriculum Development Council, its committees and the CDC-HKEAA Committees on NSS subjects who have so generously given their time and expertise to this great endeavour, as well as to dedicated Education Bureau officers with responsibility for curriculum development, and to the curriculum professionals in both Hong Kong and beyond who have so kindly contributed.

Professor Kenneth Young
Chairman,
Curriculum Development Council
2012 was a monumental year for the development of education and public assessment. In this pivotal year, over 70,000 New Senior Secondary (NSS) students took the first Hong Kong Diploma of Secondary Education (HKDSE) Examination. It is indeed a great honour for the Authority and me to have played a part in the successful completion of the inaugural HKDSE Examination, which marked a significant milestone in the history of education in Hong Kong.

I am glad to have seen the smooth implementation of the New Academic Structure (NAS) and the first HKDSE Examination. The entire education community and our stakeholders deserve enormous credit for this accomplishment.

I believe that the NAS produces students who are more proactive and outgoing. It also opens up multiple pathways for our next generation to pursue their own interests. We strive to build on that foundation and identify any areas where we can improve to ensure that we continue to meet the needs of the community and contribute to the development of our next generation. To achieve this objective, we have been working closely with the Education Bureau to review the NSS curriculum and assessment, and now the progress report on the review is in place.

Without the ongoing support and dedication of the education community and our partners, we could not have achieved so much. The Hong Kong Examinations and Assessment Authority will continue to work wholeheartedly for our students by delivering professional and equitable public examinations in the years to come. I am confident that our students and the whole community will reap the benefits of the HKDSE.

Rock Chen Chung-nin, BBS, JP
Chairman,
Hong Kong Examinations and Assessment Authority
<table>
<thead>
<tr>
<th>Acronyms</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAFS</td>
<td>Business, Accounting and Financial Studies</td>
</tr>
<tr>
<td>CDC</td>
<td>Curriculum Development Council</td>
</tr>
<tr>
<td>CIE</td>
<td>Cambridge International Examinations</td>
</tr>
<tr>
<td>EDB</td>
<td>Education Bureau</td>
</tr>
<tr>
<td>ERS</td>
<td>Ethics and Religious Studies</td>
</tr>
<tr>
<td>ESR</td>
<td>External School Review</td>
</tr>
<tr>
<td>GCE</td>
<td>General Certificate of Education</td>
</tr>
<tr>
<td>HKACMGM</td>
<td>Hong Kong Association of Careers Masters and Guidance Masters</td>
</tr>
<tr>
<td>HKAHSS</td>
<td>Hong Kong Association of the Heads of Secondary Schools</td>
</tr>
<tr>
<td>HKALE</td>
<td>Hong Kong Advanced Level Examination</td>
</tr>
<tr>
<td>HKAPA</td>
<td>Hong Kong Academy for Performing Arts</td>
</tr>
<tr>
<td>HKCAAVQ</td>
<td>Hong Kong Council for Accreditation of Academic and Vocational Qualifications</td>
</tr>
<tr>
<td>HKCEE</td>
<td>Hong Kong Certificate of Education Examination</td>
</tr>
<tr>
<td>HKDSE</td>
<td>Hong Kong Diploma of Secondary Education</td>
</tr>
<tr>
<td>HKEAA</td>
<td>Hong Kong Examinations and Assessment Authority</td>
</tr>
<tr>
<td>HKSSC &amp; SSPA-18</td>
<td>Joint Committee of Hong Kong Secondary School Councils and Secondary School Principal's Associations of 18 Districts</td>
</tr>
<tr>
<td>HMSC</td>
<td>Health Management and Social Care</td>
</tr>
<tr>
<td>ICT</td>
<td>Information and Communication Technology</td>
</tr>
<tr>
<td>IEA</td>
<td>International Association for the Evaluation of Educational Achievement</td>
</tr>
<tr>
<td>IELTS</td>
<td>International English Language Testing System</td>
</tr>
<tr>
<td>IES</td>
<td>Independent Enquiry Study</td>
</tr>
<tr>
<td>IT</td>
<td>Information Technology</td>
</tr>
<tr>
<td>JEE</td>
<td>Joint Entrance Examination for Universities in PRC</td>
</tr>
<tr>
<td>JUPAS</td>
<td>Joint University Programmes Admissions System</td>
</tr>
<tr>
<td>KLA</td>
<td>Key Learning Area</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>NARIC</td>
<td>National Recognition Information Centre</td>
</tr>
<tr>
<td>NAS</td>
<td>New Academic Structure</td>
</tr>
<tr>
<td>NCS</td>
<td>Non-Chinese Speaking</td>
</tr>
<tr>
<td>NSS</td>
<td>New Senior Secondary</td>
</tr>
<tr>
<td>OEA</td>
<td>Other Experiences and Achievements in Competitions/Activities</td>
</tr>
<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
</tr>
<tr>
<td>OLE</td>
<td>Other Learning Experiences</td>
</tr>
<tr>
<td>PIRLS</td>
<td>Progress in International Reading Literacy Study</td>
</tr>
<tr>
<td>PISA</td>
<td>Programme for International Student Assessment</td>
</tr>
<tr>
<td>PSHE</td>
<td>Personal, Social and Humanities Education</td>
</tr>
<tr>
<td>QEF</td>
<td>Quality Education Fund</td>
</tr>
<tr>
<td>SBA</td>
<td>School-based Assessment</td>
</tr>
<tr>
<td>TIMSS</td>
<td>Trends in International Mathematics and Science Study</td>
</tr>
<tr>
<td>UCAS</td>
<td>Universities and Colleges Admissions Service</td>
</tr>
<tr>
<td>UECOCS</td>
<td>University Entrance Committee for Overseas Chinese Students</td>
</tr>
<tr>
<td>UGC</td>
<td>University Grants Committee</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>USA</td>
<td>United States of America</td>
</tr>
<tr>
<td>VTC</td>
<td>Vocational Training Council</td>
</tr>
</tbody>
</table>
CONTENTS

SECTION A INVESTING IN HONG KONG’S FUTURE – ALL CAN LEARN AND SUCCEED.. 1

A1. Background to the review ........................................................................................................1
A2. The goals of the New Academic Structure and Senior Secondary Education ............ 1
A3. Collecting feedback from stakeholders .............................................................................. 4

SECTION B FUNDAMENTAL CHANGES ARE TAKING PLACE ............................................. 6

B1. From limited access to extending education opportunities for ALL in the New
Academic Structure .............................................................................................................. 7
B2. From early narrow streaming to a broad and balanced curriculum ......................... 8
B3. Balancing direct teaching and enquiry learning ............................................................... 11
B4. The Hong Kong Diploma of Secondary Education – from competitive ranking to
recognition of skills and knowledge .................................................................................. 11
B5. Towards a new global passport for local and non-local recognition and pathways ...... 14

SECTION C ACHIEVING ALL-ROUND DEVELOPMENT AND LIFE-LONG LEARNING ...... 19

C1. Improving student quality .................................................................................................. 19
C2. Broadening perspectives and global outlook ................................................................. 26
C3. Catering better for special needs ..................................................................................... 34
C4. Global student mobility through smooth articulation to multiple pathways .............. 37
C5. Supporting students’ decision-making on their next steps ........................................... 41

SECTION D CONCERTED EFFORT FOR SYSTEM-WIDE CHANGE .................................... 44

D1. Building on strengths .......................................................................................................... 44
D2. Implementing change ........................................................................................................... 45
D3. Management of resources ................................................................................................. 51
D4. Targeted professional development .................................................................................. 52
D5. A new culture of learning, teaching and assessment is emerging ................................. 54
D6. New funding and resources for the NSS .......................................................................... 59
D7. On-going needs of schools – factors seen as helping or hindering implementation
of the NSS ............................................................................................................................. 59
D8. Stakeholder support and communications .................................................................... 62
SECTION E  NEXT STEPS: FINE-TUNING THE NSS......................................................... 63

E1. Addressing schools’ concerns.................................................................63
E2. Fine-tuning the NSS curriculum and assessment .................................64
E3. Qualifications and pathways.................................................................66
E4. Support measures for schools...............................................................66
E5. Striving for continuous improvement for our students.........................66

MOVING FORWARD TO EXCEL – HONG KONG’s PIONEERING EDUCATION JOURNEY ..... 68
SECTION A  INVESTING IN HONG KONG’S FUTURE – ALL CAN LEARN AND SUCCEED

A1. Background to the review

2012 was a landmark year in the history of education in Hong Kong, when the first cohort of students completed the New Senior Secondary (NSS) Education under the New Academic Structure (NAS) and proceeded, through multiple pathways, to further studies, training and employment.

The NAS is the outcome of more than a decade of fundamental reforms envisaged in the Education Commission’s report Reform Proposals for the Education System in Hong Kong, and accepted by the Government in 2000.

We understand that ‘change is a journey, not a blueprint’ (Michael Fullan, 1999). Now that the first cohort of students have completed the NSS education and taken the Hong Kong Diploma of Secondary Education (HKDSE) Examination, it is appropriate to provide a progress report to the Hong Kong community. It is time to revisit the original policy objectives of the NAS, assess and celebrate the achievements of students and schools, understand the issues and concerns, and chart the next steps forward for the continued improvement of education in Hong Kong. A first edition of the report, for the public, was published in April 2013. This second report provides a more detailed overview of the progress for frontline practitioners in the school sector.

A2. The goals of the New Academic Structure and Senior Secondary Education

Despite many good practices under the old education system, there were, for many students, barriers to learning that needed to be addressed. This was necessary to meet the requirements of an increasingly diverse and complex social and economic environment, locally and globally, and to sustain the development of Hong Kong as an international city.

An all-round education to unleash individual potential

After extensive consultation prior to 2000, the Education Commission established that the aims of education should be to promote all-round development for all students, according to their attributes, and life-long learning – the first time such aims had been articulated.

This policy objective was the outcome of reforms agreed in 2000 and phased in across the system since then, culminating in 2009 with the first students embarking on the NSS curriculum and completing it three years later in 2012.

The NAS is premised on the belief that all students can learn and succeed. The purpose of the NAS and NSS curriculum and assessment is thus to expand education opportunities at senior secondary and post-secondary levels, to unleash the potential of all students, and to improve learning geared to achieving the aims of education. There was widespread agreement on this purpose.
From a highly selective system to a system for all

The implications of the new aims and vision for education in Hong Kong have been profound. Although Hong Kong students have consistently performed well in international tests such as the Organisation for Economic Co-operation and Development (OECD) Programme for International Student Assessment (PISA), there was widespread community agreement that the old system was no longer suitable for the 21st century.

First, it was characterised as being highly competitive and selective, channelling students at early ages into academic or vocational pathways and limiting opportunities for senior secondary and university education to the top third who won places in Secondary 6 and 7 to prepare for the Hong Kong Advanced Level Examination (HKALE). Second, the examination and assessment structure meant that teaching was focused on preparing students for examinations rather than on supporting their wider development and learning skills.

To extend learning opportunities to all and to promote life-long learning has required carefully coordinated, system-wide reforms, from kindergarten through to higher education. These included the academic structure, curriculum, new mechanisms for allocating school places for primary and secondary schools, new approaches to assessment, and new opportunities for young people to achieve higher levels of learning through multiple pathways.

School leaders and teachers would need new skills to meet the aims of a system now designed to cater for the learning needs of all students, rather than focusing on identifying the best performers in tests and examinations who could proceed to the next levels of learning.

Change through collaborative effort – designing the new system

How change was to be achieved at secondary level and beyond was carefully considered in further rounds of consultation with the education sector at different levels, parents, tertiary institutions and employers, and agreed in the Education Bureau’s (EDB’s) 2005 and 2006 roadmaps *The New Academic Structure for Senior Secondary Education and Higher Education – Action Plan for Investing in the Future of Hong Kong* and *Action for the Future – Career-oriented Studies and the New Senior Secondary Academic Structure for Special Schools*, respectively.

This involved a fundamental structural change. The old system included 13 years of primary and secondary schooling and two examinations at Secondary 5 and Secondary 7, but with places for only a minority after Secondary 5. Under the new model, all students are entitled to 12 years of free schooling up to Secondary 6, which has become the final year of secondary education, while undergraduate degree programmes have been extended from three to four years. Multiple pathways for post-secondary education, both applied and academic, have been developed to meet students’ different learning needs and enable all to continue their life-long learning. The new structure includes a new three-year senior secondary curriculum framework, building on reform that had begun at primary and junior secondary levels. The HKDSE Examination, taken at the end of Secondary 6, has replaced the Hong Kong Certificate of Education Examination (HKCEE) and HKALE.
Developing and recognising the potential of every student

The NSS curriculum has been structured around the Seven Learning Goals established by the Curriculum Development Council (CDC), in line with the overall aims of education. These are that students should:

- Be biliterate and trilingual with adequate proficiency
- Acquire a broad knowledge base, and be able to understand contemporary issues that may impact on their daily life at personal, community, national and global levels
- Be an informed and responsible citizen with a sense of global and national identity
- Respect pluralism of cultures and views, and be a critical, reflective and independent thinker
- Acquire information technology (IT) and other skills as necessary for being a life-long learner
- Understand their own career/academic aspirations and develop positive attitudes towards work and learning
- Lead a healthy life-style with active participation in aesthetic and physical activities.

These goals are to be achieved through three key elements in the NSS curriculum:

- **4 Core Subjects**
  - Chinese Language
  - English Language
  - Mathematics
  - Liberal Studies
  - Literacy + numeracy
  - critical thinking

- **2 or 3 Elective Subjects**
  - Chosen from:
  - 20 elective subjects
  - Applied Learning courses
  - Other Languages
  - Broad knowledge base and diverse interests

- **Other Learning Experiences**
  - Moral and Civic Education
  - Community Service
  - Aesthetic Development
  - Physical Development
  - Career-related Experiences
  - Positive values and attitudes, and whole-person development

Hong Kong as a model for reform

Hong Kong’s education reform programme has been cited repeatedly in international studies as a model of best practice for managing education change and improved student learning. For example, education strategist Sir Michael Barber and his team described the Hong Kong reforms as a model for their coherence, clear priorities and careful sequencing (Oceans of Innovation: The Atlantic, the Pacific, Global Leadership and the Future of Education, Pearson 2012). In addition, Grattan Institute, the Australian public policy think tank, wrote in its 2012 report, Catching Up: Learning From the Best School Systems in East Asia, that: “Hong Kong provides a leading example of successful education strategy and implementation”, with its clear objective to improve student learning.
A3. Collecting feedback from stakeholders

A system of review and fine-tuning forms part of all well-constructed reform programmes. An evaluation plan has been in place to monitor the changes and outcomes of the NAS and NSS since 2009/10. The EDB, CDC, Hong Kong Examinations and Assessment Authority (HKEAA) and others have gathered evidence from a wide range of sources and listened to the views of education stakeholders in order to understand the issues and concerns, learn from what is discovered, and nurture the ongoing improvement of education in Hong Kong.

A number of evaluation studies conducted by academics have also taken place. Local and international academic experts have been involved. A number of studies conducted by school councils and professional associations were also submitted to the EDB for consideration.

This report is based on a review of the evidence gathered since 2009. Thousands of teachers and students have contributed their views. It is part of ongoing evaluation because these are still early days for the new system. The full impact of the NAS will only emerge over time, as students progress from school along multiple pathways, ready to contribute to the wider society. Based on the feedback and other evidence collected so far, steps to further improve the NAS and NSS are already being taken. Others will be phased in from the 2013/14 school year.
A joint review of the New Senior Secondary (NSS) was conducted by the Education Bureau, Curriculum Development Council (CDC), and Hong Kong Examinations and Assessment Authority (HKEAA), June 2012-February 2013. A total of about 200 CDC/HKEAA committee and working group meetings, 138 liaison meetings, 229 seminars, forums and workshops, and 482 focus group and individual interviews have been held, involving about 20,000 people.

As part of the review, a total of 68 surveys were conducted, involving around 17,000 people. More than 480 schools responded to surveys, including the “2012 Secondary 6 Students’ Pathway Survey”, and surveys on the Hong Kong Diploma of Secondary Education (HKDSE).

More than 5,000 NSS graduates responded to the “Survey on the Experience of the First Cohort of New Senior Secondary Graduates: Impact of New Senior Secondary Education on Further Studies”.


247 Key Learning Area (KLA) coordinators, 1,125 panel heads, 1,800 teachers and 27,894 students responded to “Key Learning Area Reviews”, 2009/2010 to 2011/2012.

Satellite studies gathered information on and evaluated key features of the NSS, including Applied Learning, Other Learning Experiences, gifted education, and provision for children with special educational needs.

A total of 174 External School Reviews and 128 KLA Focus Inspections were conducted between 2009/10 and 2011/12. These paid special attention to NSS implementation.

Since 2009, the “Survey on New Senior Secondary Subject Information” has tracked the subject combinations that senior secondary students choose.

Central Policy Unit polling results on the HKDSE Examination, 5-10 January 2012.

Research and reports by other local and international agencies.
**SECTION B  FUNDAMENTAL CHANGES ARE TAKING PLACE**

The table below provides an overview of the differences between the old and new academic systems and the changes taking place in structure, curriculum, assessment, and policy and learning goals.

**Figure 2**

<table>
<thead>
<tr>
<th>Old System</th>
<th>New System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Few could learn</td>
<td>All can learn and succeed</td>
</tr>
<tr>
<td>Limited access</td>
<td>Access for ALL up to Secondary 6 to unleash potential</td>
</tr>
<tr>
<td>Academic/subject focus</td>
<td>Focus on whole-person development, knowledge, generic skills, values and attitudes, broadened perspectives and global outlook</td>
</tr>
<tr>
<td>Catered best for academic high performers</td>
<td>Caters for diversity, Applied Learning, Other Languages, Adapted Curriculum (students with intellectual disabilities)</td>
</tr>
<tr>
<td>Direct teaching</td>
<td>Balances direct teaching and enquiry learning</td>
</tr>
<tr>
<td>Early streaming</td>
<td>Broad and balanced study with choices</td>
</tr>
<tr>
<td>School-centred decision-making and time-tabling</td>
<td>Student-centred decision-making and time-tabling</td>
</tr>
<tr>
<td>Non-academic development at discretion of schools</td>
<td>Other Learning Experiences for all</td>
</tr>
<tr>
<td>60-70% of full cohort with pathways</td>
<td>100% provision for further studies</td>
</tr>
<tr>
<td>Examination to rank and fail</td>
<td>Public assessment to recognise potential</td>
</tr>
<tr>
<td>Two examinations Hong Kong Certificate of Education Examination and Hong Kong Advanced Level Examination</td>
<td>Hong Kong Diploma of Secondary Education – new local and global passport</td>
</tr>
<tr>
<td>External assessment only</td>
<td>External assessment + student telling stories (Student Learning Profile)</td>
</tr>
<tr>
<td>Diversified pathways</td>
<td></td>
</tr>
<tr>
<td>Mainly top down leadership</td>
<td>Multi-sectoral, coordinated effort</td>
</tr>
</tbody>
</table>
B1. From limited access to extending education opportunities for ALL in the New Academic Structure

The NAS and NSS aim to expand learning opportunities to all students. This has involved a key change in the education system: that all students are now entitled to 12 years of free education and to study up to the final year of secondary school, compared with the old system that limited free education to nine years and restricted Hong Kong Advanced Level study to the top third of candidates who sat the HKCEE in Secondary 5.

Unlike the old model, the NSS caters for the full range of student diversity and whole-person development, by offering a balanced mix of academic and applied learning opportunities and Other Learning Experiences (OLE), including an Adapted Applied Learning curriculum for those with intellectual disabilities.

Senior secondary education extended to all

Under the NAS, all students are eligible for 12 years of free education up to Secondary 6. A first indicator of the achievement of the policy objectives for the NAS is that the vast majority of the age group – more than 85% – enrolled in Secondary 6 in local schools compared with around one-third under the old system.

2012 was a double cohort year. Schools have worked extraordinarily hard to ensure that more than 70,200 students could complete the NSS and enter for the HKDSE Examination in 2012, while they also prepared the last Secondary 7 students to take the HKALE. In general, the first cohort of students under the new system performed well in the HKDSE. Specifically, 26,515 HKDSE candidates attained the general entrance requirements for local University Grants Committee-funded (UGC-funded) undergraduate programmes, which is more than 40% higher than the 18,302 HKALE candidates who qualified for places. Schools successfully delivered the new curriculum so that the vast majority could demonstrate the knowledge and skills required to reach levels in their chosen subjects that would support them for further studies or employment.

Multiple pathways for further study established for all

Under the NAS, all students have opportunities for further studies after completing the HKDSE, unlike the old system that could offer post-secondary opportunities to 60% to 70% of students, segregated into vocational and academic streams by their previous studies.

To support the NAS, post-secondary institutions have made suitable curriculum changes in order to have a smooth interface with the NAS and have increased the number of places to meet the demand of the two cohorts in 2012. In terms of number of students, at the undergraduate level, there were around 38,000 full-time locally-accredited first-year-first-degree places provided for the 2012/13 double cohort year. Of these, about 7,700 were self-financing places. In addition, the UGC-funded institutions and the self-financing degree-awarding institutions provided around 2,500 senior year undergraduate places and 6,600 top-up degree places respectively for graduates of sub-degree programmes and students with other qualifications. For sub-degree programmes in the 2012/13 school year, there were about 30,200 full-time self-financing locally accredited places, in
addition to 9,300 publicly funded ones.

Undergraduate education has also been extended from three years under the old model to four years under the new, enabling students to benefit from broader academic and non-academic experiences to better prepare them for their future careers and wider lives.

Foundation Diplomas and the Yi Jin Diploma have also been revised to offer another pathway for those completing the NSS.

Opportunities have been successfully extended to the full range of students. Those with mild grade intellectual disabilities made greater progress in all subjects, for all grades. Good results were seen in Adapted Applied Learning courses and the majority of the students have continued to further studies.

B2. From early narrow streaming to a broad and balanced curriculum

The NSS provides a broader, more balanced education for all, greatly expanding the type and scope of learning opportunities available to students.

Under the NSS, Chinese Language and English Language are studied as core subjects for maintaining Hong Kong as an international city where East meets West. Mathematics and Liberal Studies are also core subjects, for broadening and developing analytical and independent thinking.

In addition, students can study a wide range of elective subjects chosen from 20 academic subjects, 35 Applied Learning courses and six Other Languages. These electives enable schools to provide a curriculum tailored to students’ diverse interests and aptitudes. Applied Learning, in particular, provides balance to more traditional academic learning and helps the NSS to cater for the wider diversity of students completing senior secondary education.

There are also expanded opportunities for personal development through OLE, including Moral and Civic Education, Community Service, Aesthetic Development, Physical Development and Career-related Experiences.

Students reflect on their development in the Student Learning Profile, a qualitative record of achievement to supplement their HKDSE Examination results.

Emerging patterns in electives offered by schools and studied by students

“The Survey on New Senior Secondary Subject Information”, conducted annually since 2009/10, confirms that as a result of the reform, students are studying a wider range of subjects. In 2012, the first cohort entered the HKDSE Examination with as many as 1,129 subject combinations. Students are no longer divided into science, commerce and arts streams and can now choose elective subjects according to their interests. In the survey, the majority of students in Secondary 4 to 6 were enrolled in elective subjects across two or more Key Learning Areas (KLAs). In 2012/13, 69% of Secondary 4 students, 68% of Secondary 5 students and 58% of Secondary 6 students took electives from two or more KLAs.
Economics, Biology, Chemistry and Business, Accounting and Financial Studies (BAFS) were the four most popular Category A elective subjects studied for the 2012 HKDSE, according to subject entries in the examination (Figure 3). Yet the entries show students chose a greater diversity of subjects than in the HKALE. For example, new subjects such as Music and Physical Education were introduced and 4,445 students entered Visual Arts for the HKDSE, compared with just 272 for the 2012 HKALE. For the second cohort, the number of students pursuing these subjects showed slight increases, according to HKDSE examination registrations for 2013. In addition, there were 5,188 Applied Learning entries in 2012.

**Student voice**

“I studied Music because I am interested in it. The Music curriculum in HKDSE includes several areas, such as Chinese music and Cantonese Opera. It has helped me to master my minor music course at university”

**Figure 3**

Twelve most popular Category A elective subjects for the Hong Kong Diploma of Secondary Education (HKDSE) Examination 2012

HKDSE examination statistics for 2012 reveal differences in popularity of subject choice between male and female candidates. For male candidates, the most popular elective subjects were Physics, followed by Chemistry and Economics. For females, it was Economics, followed by BAFS, and then Biology, as seen in Figure 4.
As implementation of the NSS progresses, the EDB and HKEAA are continuing to monitor the number of electives offered by schools, as well as student enrolment for each subject. The “New Senior Secondary Subject Information Survey 2012/13”, which included survey information as well as Secondary 6 HKDSE examination registrations from 450 schools, indicated that schools offered on average 11 to 12 elective subjects in Secondary 4, 5 and 6. More than 70% of schools offered Chinese History, Economics, Geography, Biology, Chemistry, Physics, BAFS, Information and Communication Technology (ICT) and Visual Arts. More than 60% of schools offered Applied Learning. Relatively few schools – less than 10% – offered Literature in English, Integrated Science and Technology and Living. It is worth noting that some subjects, for example Combined Science and Integrated Science, are new to the school curriculum at senior secondary level and may take a few more years to gain support across schools. Patterns in subject choices can be expected to take time to stabilise.

The survey indicated that there was a trend for students at Secondary 4 to enrol in fewer elective subjects, with those taking three or more elective subjects declining from 54% for the first NSS cohort, to 36% for the fourth cohort. Those studying two elective subjects increased from 45% for the first cohort, to 63% for the fourth. Very few students took four elective subjects (2% for the first cohort and 1% for the fourth), while less than 1% for both these cohorts took less than two elective subjects. There has also been a decline in the number of elective subjects Secondary 6 students took for the HKDSE Examination, between the cohorts. For the first cohort, 28% of Secondary 6 students registered to take three or more elective subjects in 2012, compared with 20% of the second cohort of sitting the examination in 2013.

The survey shows that as students progressed through the three years of the NSS there was a slight drop in number of subjects they studied, for all cohorts. This is to be expected, because under the NSS curriculum, students are encouraged to explore their interests by taking more
elective subjects as “tasters” at Secondary 4, and to refine their choices at Secondary 5 and 6 focusing more on articulation to their desired pathways for further studies or employment. In advising students on their subject choices from Secondary 4 onwards, schools should ensure that students continue to have access to a broad curriculum, and flexible study options, rather than narrowing their choices in their first year in the NSS. In particular, students with stronger abilities should be encouraged to study more elective subjects to widen their horizons and stretch their potential. Schools should also remain alert to admissions trends for undergraduate courses. In 2012, the majority of successful candidates for UGC-funded places completed the HKDSE with three elective subjects.

B3. Balancing direct teaching and enquiry learning

The different elements of the NSS have been developed to enable schools to provide a balance of direct teaching and enquiry learning, and even collaborative learning, in order to support students in their understanding of subject knowledge as well as to develop generic skills in problem solving, self-learning skills, and independent and creative thinking. For example, Liberal Studies has been designed so that an issue-enquiry approach will be one of the major modes adopted for learning and teaching. School-based Assessment (SBA) is also fostering this through the nature of tasks set for assessment.

There is evidence that teachers are increasingly using more varied teaching approaches and materials, according to feedback from school reviews and focus inspections, curriculum development visits, and survey responses. In the “New Senior Secondary Curriculum Implementation Study 2011” (NSS Study 2011), around 60% of Secondary 6 teachers indicated that in some or most lessons they provided opportunities for students to learn some topics through enquiry, for example through analysing information, conducting surveys and undertaking project learning. More than half of the student respondents agreed that their teachers used a variety of teaching strategies, such as lecturing, group activities and games. Around two-thirds indicated that they were encouraged to ask questions in some or most lessons. (See Section D5 for further data and analysis).

B4. The Hong Kong Diploma of Secondary Education – from competitive ranking to recognition of skills and knowledge

Standards-referenced reporting

A standards-referenced system has been implemented, which means a candidate’s performance is reported with reference to a set of standards that recognises their skills and knowledge (Figure 5). This contrasts with the competitive ranking against other candidates, or norm-referenced system, previously used. In the HKDSE, achievement is recognised at a full range of levels, bringing to an end the previous system of “pass” and “fail”.

11
The review has shown that the standards-referenced reporting system has, in general, been well received by teachers, with the majority finding that it motivates students to learn by clarifying what is required to achieve certain levels. Teachers are also noted to be gradually adopting this approach beyond the assessment for the HKDSE, as intended in the CDC’s 2001 Learning to Learn – The Way Forward in Curriculum Development blueprint for curriculum reform. This indicates that the new assessment has begun to have a positive wash-back effect on the whole school system.

The standards are based on level descriptors prepared by the HKEAA. A Central Policy Unit poll conducted in early 2012 indicated that many members of the public were unfamiliar with how the HKDSE was assessed and reported. However, in a seminar with employers and the public held in August 2012, 70% considered the descriptors helped them to understand students’ performance and abilities, while 64% indicated the Student Learning Profile helped them to understand students’ personal qualities and potential and could be used for recruitment purposes.

The HKEAA and EDB will continue to relay information about the new approach to promote greater awareness.

**Figure 5**

Subject categories in the Hong Kong Diploma of Secondary Education (HKDSE)

- **Category A** core and elective subjects
  
  Results are reported in five levels (Level 1 to 5), with 5 being the highest. The top 10% of Level 5 candidates are awarded Level 5**, and the next 30% of Level 5 candidates are awarded Level 5*. There is no “pass” and “fail”. However, results below Level 1 are labelled “Unclassified”. Although candidates who complete the HKDSE achieve different levels in the subjects they take, this enables the vast majority to achieve recognition that can be used for further study or employment.

- **Category B** Applied Learning courses are assessed by course providers, with results moderated by the Hong Kong Examinations and Assessment Authority. Final results are reported as “Attained” and “Attained with Distinction”. “Attained with Distinction” is deemed equivalent to Level 3 or above in Category A subjects.

- **Category C** Other Languages are marked and graded by Cambridge International Examinations (CIE) in the United Kingdom. These are reported in five grades, from a to e, with Grade a the highest. They are based on the General Certificate of Education (GCE) AS Level Examination for these languages, which include French, German, Hindi, Japanese, Spanish and Urdu.
Balancing assessment of learning and assessment for learning

Another important feature of evaluating students under the NSS framework is SBA.

A number of subjects include SBA as a contribution to the overall result of the HKDSE. In the 2012 HKDSE, SBA was implemented in Chinese Language, English Language, Liberal Studies, Chinese History, Design and Applied Technology, History, ICT, and Visual Arts. SBA was partially implemented in Biology, Chemistry, Physics, Combined Science, and Integrated Science.

Such assessment is not entirely new to Hong Kong schools. The HKEAA has developed it as a component of public assessment over the past decade, for example for Chinese Language and Chemistry, in preparation for the NSS.

SBA has several important advantages. First, it may reflect a better picture of individual learning during the period and reduce the dependence of results on a single examination. Second, it is particularly suitable for assessing areas and skills that are difficult to assess through public examinations, such as laboratory work in sciences, investigative projects, and oral presentations.

A further key benefit is to enable teachers and students to use ongoing standards-referenced assessment and feedback to support students’ subsequent learning. This is known as “assessment for learning”.

Data shows that the majority of schools have implemented appropriate procedures for SBA, with assessment standards for the 2012 HKDSE found, when moderated, to be generally appropriate. A total of 66% of panel heads “agreed” or “strongly agreed” that SBA had become an integral part of the internal assessment in their subject or KLA, and a further 19% “slightly agreed” (NSS Study 2011). More than 50% of teachers agreed it enabled students to better understand their strengths and weaknesses. Students’ feedback has also shown that SBA can improve their learning.

Student voice

“SBA is a pretty good way to foster learning. Even though the teacher gives us the topic, we still have to search for more information from websites and understand the knowledge we have learnt in the lesson. In sum, we have to integrate all we have learnt to finish the task.”

Student voice

“Sometimes the SBA is closely related to what we have learnt in the lesson. For example, we learn workplace communication in the English elective and do a test and oral presentation for it as SBA. As such, lesson time will be used in a more efficient manner.”
Feedback from teachers and schools indicated that while there was overall support for the rationale for SBA, there were concerns about some of the practicalities in time-tabling; the impact on workload for both students and teachers; and some reports of over-drilling for the assessments, as seen further in Section D5.

Based on this feedback, SBA will be streamlined according to its necessity and suitability for various subjects, with the pace of implementation adjusted to meet the needs of schools and their students.

From external assessment only to students telling their stories in the Student Learning Profile

Under the NSS, external assessment is now balanced by students leaving school with a qualitative record of their achievements, the Student Learning Profile. This reflection of their own stories of learning, built up over the three years of the NSS, is now used to support applications for further studies and employment and has been accepted by local and overseas institutions as a useful reference in the selection of candidates.

However, at this early stage, the value of this document still needs to be better understood among students and educators, and promoted as an important indicator of achievement among employers and higher education institutions (MacBeath, 2013).

B5. Towards a new global passport for local and non-local recognition and pathways

A key achievement towards the policy objectives was recognition of the HKDSE by post-secondary and higher education institutions and employers, locally and outside Hong Kong.

Local recognition and broadened admissions requirements are pivotal

Recognition for further studies was achieved locally through collaboration and close coordination across the school, post-secondary and higher education sectors, the EDB, CDC and HKEAA.

After four years of communication and consensus building, post-secondary and higher education institutions agreed to broaden their admission requirements to acknowledge the diverse interests, aptitudes and abilities of students.

Higher education institutions also began developing their new, broader four-year programmes as part of the NAS, building on the aims behind the NSS and paving the way for the admission of the first NSS graduates in the autumn of 2012.

In 2008, the Heads of Universities Committee announced the minimum admissions requirement for UGC-funded institutions.

- Level 2 would be required in Mathematics and Liberal Studies, and Level 3 in English and Chinese languages.
- They also indicated that they would accept the Student Learning Profile as a reference for candidates’ whole-person development.
This was a pivotal decision as it endorsed the NSS curriculum and the importance of Liberal Studies and Mathematics as core subjects. It has also had a positive wash-back effect on students’ subject choices in the NSS.

Subsequently, individual institutions published more detailed requirements, including specifications for one to two elective subjects, for different subject areas. They developed a range of approaches for scoring HKDSE results, as well as for recognition of Mathematics Extended Part, Applied Learning, OLE and the Student Learning Profile.

The eligibility for admission to post-secondary Associate Degree and Higher Diploma programmes was established at five subjects at Level 2, including Chinese Language and English Language. Up to two courses in Applied Learning at the “Attained” level could be considered within the five.

Under the NAS, students can complete sub-degree programmes in two years of full-time study. The Revised Common Descriptors for Associate Degree and Higher Diploma programmes has stipulated that the duration of the sub-degree programmes for eligible NSS graduates is two years. In other words, Higher Diploma and Associate Degree graduates may apply for articulation to Year 3 of a four-year university degree or Year 2 of a three-year university degree. On progression pathways, generally speaking, more than half of the sub-degree graduates pursue further studies.

For admission to Yi Jin Diploma and Foundation Diploma programmes under the NAS, students need to complete Secondary 6. For Yi Jin Diploma, students with Applied Learning results of “Attained” or “Attained with Distinction” can be exempted from taking up to two elective modules.

Yi Jin Diploma and Foundation Diploma programmes are one-year courses if studied full-time. Both of these diplomas are recognised by the Hong Kong Council for Accreditation of Academic and Vocational Qualifications (HKCAAVQ) as equivalent to five subjects at Level 2 in the HKDSE, including Chinese Language and English Language, allowing progression to sub-degree programmes.

Recognition for employment

The Civil Service Bureau has taken the lead in recognising the HKDSE for employment. In June 2011, it announced that it would accept a combination of five HKDSE subjects, including Category A NSS subjects at Level 2, “Attained” in a maximum of two Category B Applied Learning courses, and Grade e in Category C Other Languages as having met the previous requirement of five passes at HKCEE. Five Category A NSS subjects at Level 3, “Attained with Distinction” in a maximum of two Category B Applied Learning courses and Grade c in Category C Other Languages would be treated as having met the requirement for two passes at HKALE and three credits in the HKCEE.

Focus group interviews with human resource professionals indicated that employers supported the direction of the NAS, in particular for providing new opportunities for students to broaden their horizons and develop soft skills such as problem solving, independent and critical thinking and creativity that were important for successful employment.
Further feedback collected from focus group interviews with employers showed that employers considered the core and elective subjects had, to different extents, laid a better foundation for career development, while OLE helped prepare students for future employment by providing expanded opportunities for personal development.

Based on the interim observation of an employer survey and focus group interviews with employers, it was revealed that employers generally agreed that the standards-referenced reporting system enabled them to understand explicitly what the candidates knew and could do when they had achieved a certain level of performance. Employers also agreed that the Student Learning Profile adopted in the NAS enabled them to have a better understanding of applicants’ achievements and participation in the activities, and facilitated their selection of suitable employees.

Non-local benchmarking and recognition

As an international city that sits between East and West, it has been important to ensure that the new qualification is recognised internationally and can act as a “life-long learning passport” for students to study in universities beyond Hong Kong, including the most competitive. This was acknowledged in 2000, in the Education Commission’s reform blueprint, and has been included in the planning and implementation of the NSS since then.

Since 2005, a number of steps have been taken to achieve non-local recognition, well before the first students completed the new qualification. The 24 NSS subject curricula were benchmarked by international curriculum agencies.

During the design of the HKDSE, level descriptors were referenced against other qualifications such as General Certificate of Education (GCE) A Levels to ensure it met international expectations as a school-leaving qualification. This recognition was formally secured in 2009, when the United Kingdom (UK) National Recognition Information Centre (NARIC) assessed the HKDSE as an equivalent qualification to the GCE A Level and similar qualifications.

The HKEAA also commissioned the Universities and Colleges Admissions Service (UCAS), which manages applications to higher education programmes in the UK, to conduct a benchmarking study against the GCE A Level, to enable the HKDSE to be included in the UCAS Tariff. The Tariff is used by higher education institutions in the UK and other countries to determine direct comparability between qualifications, by points, for admissions purposes.

The benchmarking study of the HKDSE was completed in late 2009. Under the UCAS Tariff, Level 3 to Level 5* of the HKDSE have been assessed as comparable to the standard of GCE A Level grades E to A*. In December 2012, UCAS confirmed that the HKDSE Level 5** exceeded that of the GCE Grade A*, recognising the very high standard of the qualification. The Australian government has, since 2007, recognised the HKDSE as equivalent to the Australian Senior Secondary School Certificate. The qualification is now accepted for direct admissions to degree courses in that country.
In November 2011, the Ministry of Education of the People’s Republic of China announced that HKDSE holders will be exempted from taking the Joint Entrance Examination for Universities in PRC (JEE) when applying to 63 higher education institutions in the Mainland. The number has been increased to 70 in the 2013/14 Scheme. From 2012 onwards, the University Entrance Committee for Overseas Chinese Students (UECOCS) of Taiwan has accepted HKDSE holders for direct admission to more than 140 Taiwanese universities.

So far, 70 institutions from Mainland China, 148 in Taiwan and three from Macau, along with more than 150 overseas institutions from Australia, Belgium, Canada, Korea, New Zealand, Singapore, Switzerland, the UK and the United States of America (USA), have published their admission requirements for HKDSE holders on the HKEAA website. The HKDSE has been welcomed by universities such as University of Cambridge and University College London for its balance between developing rigorous academic knowledge and generic skills, in particular the increased focus on helping students to think critically and creatively, and to develop their capacity for independent learning.

Applied Learning courses are recognised internationally for undergraduate study, and for entry to post-secondary diploma programmes in countries such as Australia and the UK, varying by institutions, faculties and programmes. Many overseas institutions, such as Yale University and the University of Cambridge, have indicated that they will consider the Student Learning Profile as reference information for admission.

In addition, a study has been made to compare the standards between the International English Language Testing System (IELTS) and the HKDSE English Language Examination. The study aims to facilitate users in their evaluation of HKDSE candidates’ English proficiency. Based on the study, candidates with Level 4 in HKDSE English Language achieved a mean overall IELTS band score that lies between the confidence interval 6.31 to 6.51. It is worth noting that the two examinations are primarily different in nature, and therefore information in Figure 6 serves as reference only, not for any direct benchmarking purposes.

Candidates with Level 3 in HKDSE English Language, which is the minimum English Language requirement for admission to local universities, achieved a mean overall IELTS band score that lies between the confidence interval 5.48 to 5.68, indicating that their standards are between those of Modest Users and Competent Users on the IELTS scale (Figure 6 and 7).
The IELTS results of test takers are reported in the form of band scores on a scale from 1 to 9. The nine bands are as follows:

**Figure 7**

<table>
<thead>
<tr>
<th>International English Language Testing System (IELTS) Band</th>
<th>Level of User</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Expert User</td>
</tr>
<tr>
<td>8</td>
<td>Very Good User</td>
</tr>
<tr>
<td>7</td>
<td>Good User</td>
</tr>
<tr>
<td>6</td>
<td>Competent User</td>
</tr>
<tr>
<td>5</td>
<td>Modest User</td>
</tr>
<tr>
<td>4</td>
<td>Limited User</td>
</tr>
<tr>
<td>3</td>
<td>Extremely Limited User</td>
</tr>
<tr>
<td>2</td>
<td>Intermittent User</td>
</tr>
<tr>
<td>1</td>
<td>Non User</td>
</tr>
</tbody>
</table>

Source: www.IELTS.org

“We welcome the introduction of the Hong Kong Diploma.”

- Dr Geoff Parks, Director of Admissions, University of Cambridge

“The Hong Kong Diploma marks a very significant shift in secondary education. UCL is impressed by the care that has gone into it.”

- Professor Michael Worton, Vice-Provost, University College London
SECTION C ACHIEVING ALL-ROUND DEVELOPMENT AND LIFE-LONG LEARNING

This section reviews the impact of the NSS on student learning and indicators of success in academic attainment, all-round development and preparation for life-long learning as achievements of policy objectives in promoting all-round development and life-long learning through expanding learning opportunities.

C1. Improving student quality

A key policy objective in implementing the NSS and NAS has been to improve the quality of learning and whole-person development for all students, in line with the agreed aims of education:

“To enable every person to attain all-round development in the domains of ethics, intellect, physique, social skills and aesthetics according to his/her own attributes so that he/she is capable of life-long learning, critical and exploratory thinking, innovating and adapting to change; filled with self-confidence and a team spirit; willing to put forward continuing effort for the prosperity, progress, freedom and democracy of the society, and contribute to the future well-being of the nation and the world at large.”

Education Commission, 2000

This represents a departure from the old system, which did not provide explicit goals for students’ academic and wider development.

The data collected from school surveys between 2003 and 2011 has shown that there is still consensus on the Seven Learning Goals that support the aims of education.

From a narrow scope to wider academic attainment

- Candidates’ attainment in the first HKDSE Examination indicates that the vast majority successfully achieved learning outcomes in a balanced mix of subjects in order to continue their studies, or to prepare them for training or directly for employment. Larger numbers achieved higher levels of performance than under the old model. Around 95% of subjects sat achieved standards from Level 1 or above – recognition of performance that students can use for further study, training and employment.

- 47,853 day school candidates, or 69%, met the academic requirements for sub-degree study, by achieving five Category A subjects at Level 2 or above, including Chinese Language and English Language. Category B Applied Learning at “Attained” or above in up to two courses, is included within the five. Among female candidates, 76% achieved these results, compared with 63% of male candidates. A total of 78% of female day school candidates achieved five subjects at Level 2 or above, compared with 69% of males.
- 26,515 day school candidates, or 38%, qualified for publicly funded undergraduate degree places, by achieving Level 3 or above in Chinese Language and English Language and Level 2 or above in Mathematics Compulsory Part and Liberal Studies. This represented around one-third of the cohort, and 40% more than the number of HKALE candidates who qualified for undergraduate study under the old system. Among female candidates, 45% achieved these results, compared with 30% of the male candidates. This gender disparity evens out at the top end of the results: 7.9% of male candidates achieved levels 3322 in the core subjects plus two electives at Level 5 or above, compared with 7.4% of female candidates. Slightly more females, 4.4%, achieved five subjects at Level 5 or above, than males (3.6%).

- For Applied Learning courses, 91% of the subjects assessed were awarded “Attained” or above, and 24% achieved “Attained with Distinction”.

- For Other Languages, 82% of subjects sat achieved Grade e or above, while 27% of candidates achieved Grade a.

One in five day school candidates sat for the Mathematics Extended Part, in addition to Mathematics Compulsory Part. Male candidates accounted for 55% of the candidates who sat Calculus and Statistics (Module 1) and 68% for Algebra and Calculus (Module 2). For both modules, 11,578 candidates, or 75%, achieved Level 3 or above.

Almost two-thirds of candidates registered for two elective subjects, in addition to the four core subjects, and just over a quarter for three elective subjects. However, statistics from the HKEAA suggest that there is a downward trend for students to study fewer elective subjects, with 20% registering for three or more electives in the 2013 examination, compared with 28% in 2012. Very small numbers take more than that.

The HKEAA invited all schools to provide feedback on the HKDSE after the first examinations were completed in 2012. Teachers held positive views as to how the examination reflected the new assessment aims and objectives, the level of difficulty, and balance in curriculum coverage.

However, in the “NSS Study 2011” conducted in the months before the public examination, less than half of Secondary 6 students had confidence in taking it. This is not surprising, given that this was the first cohort to prepare for the examination that included new subjects and new ways of assessing performance. The confidence of future cohorts should improve, but will require continued monitoring.

Feedback from the review has indicated where the examination could be improved to best support student learning and enable teachers to better prepare their students. This includes reviewing the balance of content in both the curriculum and the assessment, and the balance between examination and SBA used in some subjects.

The EDB, CDC and HKEAA have listened to views so that the curriculum content and assessment can be refined.
From subject-focused learning to whole-person development

In addition to formal assessment in the HKDSE, feedback from principals, teachers and students indicated that the new curriculum had contributed positively to the quality of student learning, in both academic and non-academic areas. Their feedback indicated that the Seven Learning Goals of the NSS, developed by the CDC to fulfill the aims of education, was being achieved by students. Principals were most positive, ahead of panel heads and then teachers. This reflects a common phenomenon in such questionnaires that the closer to the source of practice, the greater the reservation concerning the effect or impact. This phenomenon will be seen in other data in this report and indicates that those in authority need to pay attention to the views of frontline teachers, and also of students, as well as those in leadership positions.

The vast majority of principals, panel heads and teachers saw particular strengths in students’ respecting pluralism of cultures and views, and becoming proficient in IT skills. However, responses indicated that there was still room for improvement for students to develop a broad knowledge base, become biliterate and have a sense of national identity, with around two-thirds of teachers and students agreeing to proficiencies in these areas. School reviews and student feedback also indicated that among the Seven Learning Goals, Aesthetic and Physical Development needed to be further enhanced.

Figure 8

Student performance in achieving the Seven Learning Goals: views of principals, panel heads, teachers and students – percentage agreeing

Source: “New Senior Secondary Curriculum Implementation Study 2011”. Number of respondents: principals 86; panel heads 515; Secondary 6 teachers 838; Secondary 6 students 4,614. Students were asked to respond on their own performance.
Teachers provided feedback that students have performed reasonably well in generic skills of communication, critical thinking, and creativity (Figure 9), and developed positive values and attitudes, such as integrity, sense of responsibility, and love and care for others. The “Other Learning Experiences Satellite Study” (OLE Satellite Study), which involved over 2,400 students and their teachers, suggested that OLE could contribute to students achieving the learning goals related to non-academic areas and generic skills, attitudes and values (See Section C2 for further data and analysis).

Figure 9

Teachers' views on their Secondary 6 students' generic skills

![Bar chart showing teachers' views on secondary 6 students' generic skills]

Note: Between 44% and 47% of teacher respondents indicated “slight agreement” on these generic skills among their students. Source: "New Senior Secondary Curriculum Implementation Study 2011”.

Also significant for preparing young people for life-long learning is the fact that students have, in general, found the subjects in the new curriculum enjoyable and interesting to learn, and believed the subjects could help them learn independently, according to feedback from the great majority of Secondary 5 and 6 students surveyed in the “Key Learning Area Reviews”, 2009/10 to 2011/12 (Figure 10a and 10b). However, among the core subjects, they were less positive about Liberal Studies. Teachers will need to focus on building students’ confidence, enjoyment and interest in the subject.

Overall, the feedback for all subjects suggests students have been both stretched and engaged in their studies. Less than half found the subjects easy, which reflects on the rigour of the NSS curriculum.
Figure 10a
Secondary students’ views on their New Senior Secondary (NSS) learning, for all Category A subjects


Figure 10b
Secondary students’ views on their New Senior Secondary (NSS) learning, core subjects, percentage agreement

Source: “Key Learning Area Reviews”, 2009/10 to 2011/12.
Equipping students with knowledge, positive attitudes and skills for further studies and work

Feedback from the first cohort of NSS graduates elucidated that the NSS curriculum had helped prepare them for further studies by:

- Providing relevant basic knowledge for their next stage of learning
- Nurturing positive values and attitudes
- Developing their generic skills
- Fostering their interests and aspirations

For the first cohort of NSS graduates surveyed (total 5,226), especially those pursuing undergraduate study, a vast majority of them considered that the four core subjects had, to different extents, laid a foundation for their current studies (Figure 11).

**Figure 11**

*New Senior Secondary (NSS) graduates who considered the core subjects helped lay a foundation for their current studies*

![Bar chart showing helpful percentage for core subjects]


For the impact of Category A elective subjects on the NSS graduates’ current studies, more than 75% of respective respondents\(^1\) for each subject indicated that the subject had, to different extents, helped lay a foundation for their current studies.

Meanwhile, students indicated they exhibited the values and attitudes, as well as generic skills, in their current studies or campus life (Figure 12).

\(^{1}\) The number of respondents for each elective subject ranged from 22 to 2,034.
Figure 12

New Senior Secondary (NSS) graduates’ attitudes/behaviour towards their current studies

NSS graduates reflected that they were always or often able to:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submit assignments on time</td>
<td>98%</td>
</tr>
<tr>
<td>Consult &amp; respect others’ different opinions</td>
<td>96%</td>
</tr>
<tr>
<td>Observe academic integrity strictly</td>
<td>94%</td>
</tr>
<tr>
<td>Do assignments with commitment &amp; to the very best</td>
<td>92%</td>
</tr>
<tr>
<td>Attend classes punctually</td>
<td>90%</td>
</tr>
</tbody>
</table>


The “OLE Satellite Study” suggested a correlation between students’ participation in OLE and their positive attitudes such as increased aspirations for their careers and further studies, self-confidence, motivation, and enhanced leadership and communication skills.

Early anecdotal feedback from tertiary institutions endorses the NSS in general. Most importantly, it indicates that NSS graduates are demonstrating positive attitudes and learning skills. For example, students from the first cohort are said to be more proactive, focused, better motivated, and inquisitive.
Feedback from employers as revealed in the interim observation of an employer survey and focus group interviews indicated that employers basically had positive views of the performance of NSS graduates. Over 80% of the employer respondents acknowledged that the performance of NSS graduates across various attributes had met or exceeded their requirements, including using IT at work, comprehension and preparation of data, creativity, Putonghua proficiency, self-confidence, and establishing an effective social network.

The employers expressed the importance of Mathematics as a core subject in the NSS curriculum, which better equipped students with increased sensitivity towards “numbers” and better performance in comprehension and preparation of data, facilitating them to understand the key performance indicators in business operations. They also reflected that under the education reform, the early introduction of Putonghua, starting from the basic education, had led to an improvement in Putonghua proficiency among NSS graduates.

**Areas for improvement**

Despite the evidence of much good practice among schools, there is still more to do in catering for the full diversity of students in the NSS. Feedback from students, school reviews and focus inspections and curriculum development visits indicates that teachers can go further in adapting lessons to meet different students’ learning needs, as well as to ensure more student interaction in class.

In the “NSS Study 2011”, the great majority of teachers indicated that they based their teaching on students’ interests and abilities. However, less than 50% of Secondary 6 students agreed that their teachers, in some or most lessons, encouraged students with lower academic achievement in particular and provided them with opportunities to participate in learning activities.

The new features of the NSS curriculum that cater for diversity are analysed in the next section. Catering for diversity is also considered in Section D2.

**C2. Broadening perspectives and global outlook**

The following sections focus on new elements of the NSS that contribute in particular to the wider development of students, and to meeting the needs of the diversity of learners.

**Liberal Studies: broadening students’ knowledge base and learning skills**

One of the unique features of the NSS is the core subject of Liberal Studies, which has been introduced to the curriculum in order to help students deepen their awareness of contemporary issues, broaden their knowledge base and perspectives, develop their global outlook and strengthen their independent and analytical skills. As such, it contributes significantly to the *Seven Learning Goals*. The subject includes an Independent Enquiry Study (IES), to develop students’ abilities to learn independently. The IES gives them the opportunity to research a topic of particular interest to them, and that may be relevant to their future study and career ambitions.
Focus inspections confirm that schools have, in general, paid great attention to whole-school curriculum planning for Liberal Studies, including in the development of study and project learning skills in junior secondary, to pave the way for the learning required at senior secondary levels.

To deliver the subject, schools have established new teams of teachers, with varying mixes of expertise and experience. Emphasis has been given to the sharing of experiences and resources through collaborative lesson planning and wider professional networks.

Inspectors have found that schools have, in general, adopted a variety of approaches to enable students to have a better understanding of social issues, such as arranging visits, talks and other life-wide learning activities that can broaden their horizons.

However, inspectors noted varying success in implementation of the new subject. Workload for teachers – frequently a significant concern - had often not been clearly defined and as a result had tended to be heavy.

The majority of teachers and students gave feedback that most of the broad learning outcomes and curriculum aims of Liberal Studies were being achieved. Teachers indicated to inspectors that the subject had helped raise their students’ civic awareness and interest in understanding and participating in discussion about daily societal issues, as well as improved their study and generic skills, and values and attitudes.

Teachers’ feedback indicated that the IES had a positive impact by fostering the development of problem solving and critical thinking skills, confidence in learning and information literacy. In addition, by enabling students to explore their interests, it had helped prepare them for multiple pathways for further studies or employment.

Not surprisingly, the first NSS cohort was tentative about the new subject, and in survey responses indicated that they lacked confidence in their abilities, as seen in Section C1, Figure 10b. However, this was not reflected in the good examination results – around 91% achieved Level 2 or above, meeting the requirements for undergraduate study in Hong Kong, and 73% achieved Level 3 or above.

The subject has been fine-tuned based on early feedback, with clearer guidelines already circulated on the IES, and adjustments made to the length and complexity of the Liberal Studies public examination, which the current Secondary 6 students will benefit from. As teachers and students become more familiar with the enquiry-based learning that the subject involves, confidence and enjoyment should increase.

**Student voice**

“Liberal Studies taught me critical thinking and the format to write an essay. Teachers taught us how to answer questions, how to think in different ways and we need to write supporting evidence. It is helpful since I use this mode of thinking in writing assignments at university.”
Applied Learning: catering for diverse interests and learning approaches

Applied Learning is another important new feature of the NSS curriculum. It has been included to provide a balance between theoretical and applied learning, so every student – including those who learn more by doing – can develop their potential through different learning approaches and styles. With its equal emphasis on the development of knowledge, skills, values and attitudes, it enables students to prepare for further studies or work, as well as for life-long learning.

Applied Learning is largely delivered in partnership with post-secondary institutions such as the School of Professional and Continuing Education, The University of Hong Kong, and The Hong Kong Academy for Performing Arts (HKAPA); with the Vocational Training Council (VTC) being the largest provider. In the first cohort (2010-12 cohort) under NSS, there were 6,690 student enrolments for Applied Learning courses from 303 secondary schools.

In the “Applied Learning Satellite Study”, an extremely high proportion of stakeholders (96%) agreed with the aims of Applied Learning. Responding participating schools indicated that it contributed significantly to the diversification of secondary education and students’ exploration of career aspirations and orientation for life-long learning in specific areas.

Students have also endorsed Applied Learning courses: 81% agreed that Applied Learning enabled them to understand fundamental theories and concepts through application and practice, and more than three-quarters agreed that it was interesting and fun.

**Student voice**

“I have learnt a lot – mainly in personal development. Through the course, I have learnt a lot about life, such as how to collaborate, how to negotiate, and how to reflect… I think I could learn more about life in Applied Learning than in other courses.”

**Student voice**

“I think I have widened my horizons and become more knowledgeable after studying Applied Learning.”

The vast majority of stakeholders considered Applied Learning impacted positively on students’ development, such as their personal growth, learning, values and future orientation (Figure 13). The majority agreed it could build their confidence, sense of achievement and interest in learning through its practical approach. They also agreed it was relevant to the wider social, economic and technological needs of society (Figure 14).
**Figure 13**

**Impact of Applied Learning on students’ learning: stakeholder views**

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Total agreement (all stakeholders) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhances students’ self-confidence</td>
<td>81</td>
</tr>
<tr>
<td>Helps students learn how to learn independently</td>
<td>81</td>
</tr>
<tr>
<td>Arousing students’ learning interest</td>
<td>82</td>
</tr>
<tr>
<td>Widens students’ horizons</td>
<td>93</td>
</tr>
</tbody>
</table>

Source: “Applied Learning Satellite Study”. Note: total stakeholder respondents include principals, school coordinators, course provider coordinators, course tutors, students, and parents. Questionnaires were completed by 181 schools, 1,758 students, 1,076 parents and 11 course providers, with response rate varying from 52% for parents to 100% for course providers.

**Figure 14**

**Relevance of Applied Learning to the social, economic and technological needs of society: stakeholder views**

<table>
<thead>
<tr>
<th>Stakeholder Group</th>
<th>Total agreement (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>School co-ordinators</td>
<td>72</td>
</tr>
<tr>
<td>School heads</td>
<td>75</td>
</tr>
<tr>
<td>Parents</td>
<td>72</td>
</tr>
<tr>
<td>Students</td>
<td>66</td>
</tr>
<tr>
<td>Course tutors</td>
<td>91</td>
</tr>
<tr>
<td>Course provider co-ordinators</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: “Applied Learning Satellite Study”.

Employer feedback has also been sought. In general, in focus group interviews employers agreed that Applied Learning contributes to enhancing the human capital and competitiveness of Hong Kong.

> “From a human resources development perspective, Applied Learning can help enlighten students about their future career, as well as strengthen generic skills, such as communication skills, interpersonal skills and team work spirit.”

- Human Resources practitioner
Schools have reported some concerns. These included the need to keep the curriculum up to date and relevant; time-tabling issues for courses delivered outside the school; the need to offer some Applied Learning courses in English, in particular so that Non-Chinese Speaking (NCS) students can access the programmes; and the need to promote greater recognition of Applied Learning. The moderation method for “Attained with Distinction” and the fact that the highest level of performance is comparable to only Level 3 or above in Category A subjects, have also been raised as concerns – issues that will be addressed in the fine-tuning of the NSS.

Due to financial constraints, some schools set very limited quotas on the numbers of students who can enrol in Applied Learning courses. To address this, the Diversity Learning Grant is being increased. From the 2012-14 cohort there will be funding for 10 free places per school.

Despite the challenges, Applied Learning has provided a good foundation for further studies. More than half of NSS graduates who completed Applied Learning courses agreed that there was a positive impact from the courses on their current choice of post-secondary study programme.

Applied Learning provides an important contribution to the achievement of the policy intention to diversify the NSS curriculum and broaden the learning opportunities available to a wide spectrum of students, of all academic abilities. Many stakeholders considered the objectives of offering diverse learning opportunities to cater for students’ different learning needs and interests were being achieved, though course provision should be regularly reviewed and refined.

Other Learning Experiences and the Student Learning Profile

OLE is intended to support the wider development of students and to balance the academic subjects they pursue. It is designed to foster positive values and attitudes through a wide range of forms and approaches, including structured lessons, service learning and experiential learning. OLE includes Moral and Civic Education, Community Service, Aesthetic Development, Physical Development and Career-related Experiences. The curriculum guide advises schools that quality, rather than quantity, matters in OLE.

Students’ experiences and reflections on their academic and other learning experiences and achievements are captured in the Student Learning Profile – their own stories of learning. This is used to support their own learning, as well as their applications for further studies or employment.

The “OLE Satellite Study” indicated the general agreement among teachers in the value and importance of OLE for widening students’ horizons, developing their interests, and facilitating their all-round development, as well as cultivating positive values and attitudes. It also indicated that it was improving students’ personal and social development, in areas such as their self-concept, leadership and being able to set life goals.
**Figure 15**

The views of teachers on the impact of Other Learning Experiences (OLE)

<table>
<thead>
<tr>
<th>Impact on students</th>
<th>Percentage agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>OLE nurture positive values and attitudes</td>
<td>99%</td>
</tr>
<tr>
<td>OLE widen students’ horizons and develop their life-long interests</td>
<td>98%</td>
</tr>
<tr>
<td>OLE facilitate students’ all-round development as life-long learners with a focus on sustainable capacities</td>
<td>91%</td>
</tr>
</tbody>
</table>

Source: “Other Learning Experiences Satellite Study”, with stratified sample of 86 schools across different school contexts and backgrounds.

The positive values, attitudes and generic skills seen among NSS graduates can also be related to their participation in OLE. A group of around 5,000 NSS graduates surveyed after leaving school for further studies agreed that their acquired generic skills, values and attitudes, such as self-confidence, caring, self-management skills, communication and social skills, were related to their participation in OLE.

A longitudinal study involving 2,434 student respondents in Secondary 5 and 2,320 in the following year in Secondary 6 from seven schools showed that students increased their preference for, and participation in, OLE across the two years.

Over 80% of teachers in the “OLE Satellite Study” perceived the greatest impact of OLE was on the development of students’ interpersonal relationships, which triangulated positively with students’ responses in the longitudinal study. Over 60% of teachers perceived a positive impact on students’ self-confidence, teacher-student relationships, and their leadership development, similar to responses from students in the longitudinal study demonstrating improved self-concept, leadership skills and attitudes to school.

Researchers also noted from focus group interviews how OLE could change students’ attitudes towards learning through in-depth reflection, as indicated in the testimonials below.

“We provide students with autonomy and let them design how to run the activity. We wish to walk towards the Student-LED approach. For example, this year, the student union held many activities themselves. Previously, most activities were organised by the teachers. They used to teach and arrange activities. Their workload was heavy. Student-LED projects enable students to take responsibility.”

“The Student Learning Profile helps students to think about what they have learnt and how they have grown.”

- OLE secondary school teachers
The study sought to affirm the important role of the Student Learning Profile in maximising the benefits of OLE experiences through students' self-reflection. It identified good practices in schools that facilitated deep and holistic reflections. These included:

- A culture of sharing among students and teachers about their reflections on OLE activities and on the Student Learning Profile
- High involvement of students when creating the Student Learning Profile
- Early and progressive preparation of the Student Learning Profile
- Career-related Experience activities that could give opportunities to students to discover their aspirations
- Facilitation from teachers, for example through workshops or class periods, for students to reflect on the Student Learning Profile
- Students given the choice to select OLE activities that they were interested in, in addition to school-assigned OLE
- Encouragement of students to focus on deep reflection rather than polishing the language in their self-accounts.

OLE was found to work best in schools where there was strong leadership from school leaders and co-ordination by middle-managers, and when integrated with the school’s vision. It required a strong culture of teamwork.

Practices were found to vary considerably in OLE. In some schools, the concept of the Student Learning Profile was introduced as early as Secondary 1, with positive outcomes. In others, it was left as late as Secondary 5 and even Secondary 6, with more superficial results. Amongst the five areas of OLE, Career-related Experiences was found to be less well developed than other areas. Career-related Experiences was identified as needing to cater better for the diversity of students.

Focus inspections have also identified Aesthetic Development as an area for improvement, with a lack of specific learning objectives in many schools and appropriate follow-up activity. It was recommended in the Senior Secondary Curriculum Guide (CDC, 2009) that structured Art and PE-related lessons should be included within OLE, and this was emphasised by the CDC in the fine-tuning of the NSS curriculum.

The satellite study revealed a tension between OLE and traditional academic subjects, with schools prioritising the latter and not necessarily appreciating that OLE could enhance students’ attitude towards learning that would eventually impact on academic performance. Some students and parents questioned the value of OLE and the Student Learning Profile, perceiving that students needed to invest more time in achieving the examination grades required for university and post-secondary course entry.

There was also a tension in how stakeholders perceived the purpose of the Student Learning Profile: the balance between a document that could support university admission, and one that had intrinsic educational value in supporting students’ learning through self-reflection. For the former,
students would want to emphasise, or even over-emphasise, their positive attributes, such as the prizes won, rather than engage in deeper reflection about their learning development.

The study also found a concern among some teachers who perceived their role to involve teaching, not organising activities. Some exemplary projects, such as Students as Learning Experience Designers (Student-LED) project\(^2\), demonstrated how OLE could achieve optimised strength by empowering students to organise their own OLE activities in schools, as well as help relieve the workload of teachers.

These tensions are understandable. It will take time for everyone to recognise the benefits of other learning experiences and how they can be recorded – the students themselves, their parents, and those selecting them for further studies or employment.

The study found that OLE could be better organised and coordinated in many schools, with a focus on the quality of experiences, rather than the quantity of activities and time spent on them. For example, students interviewed suggested that some schools had incorrectly presented the accumulation of a certain number of OLE hours as necessary for school matriculation and university admission.

"If universities only focus on academic results, colleagues may put pressure on the senior management, requesting the release of OLE lesson time for subject learning."

"Different stakeholders held various views towards OLE and the Student Learning Profile. The school lives of senior form students have been enriched since OLE was implemented. However, some still take entering university as their final goal so they could not actively participate in OLE. Parents who understand whole-person development can easily accept OLE. However, those with traditional mind-sets want their children to concentrate on study instead of organising activities."

- OLE secondary school teachers

OLE is one of the unique features of the NSS curriculum, and one of its strengths which, over time, should gain greater recognition for its role in achieving the Seven Learning Goals and enhancing students’ learning, generic skills and positive values and attitudes.

As an outcome of the review, OLE will be fine-tuned to give schools greater flexibility in allocating time to OLE activities. Schools will be encouraged to focus more on the quality of experiences.

---

\(^2\) The Students as Learning Experience Designers (Student-LED) project was co-founded by Prof. Edmond Ko (The Hong Kong University of Science and Technology), Hong Kong Association of the Heads of Secondary Schools (HKAHSS) and EDB in 2010. Students participating in the project could play more active roles in designing their own learning experiences in OLE activities in schools and be facilitated to develop a reflective habit through the learning process.
C3. Catering better for special needs

Supporting students with special educational needs

The NSS curriculum envisages that students with special educational needs should have the same range of learning experiences as others at school. Opportunities provided should allow these students to achieve as much independence as possible so that they can lead fulfilling lives and contribute to the community.

Under the prevailing government policy, schools are advised to adopt a whole-school approach to catering for diversity to support students with special educational needs in learning with their peers in ordinary schools so that they can enjoy the full benefits of mainstream education. Those with severe or multiple disabilities attend special schools for intensive support services.

Feedback from students and parents in the “New Senior Secondary Curriculum for Students with Intellectual Disabilities (NSS(ID) Curriculum) Satellite Study” indicated that the NSS curriculum, as adapted for those with intellectual difficulties, achieved its aims of broadening students’ horizons and life experiences, and enabled greater participation in learning, and fun. The curriculum supported their wider development, such as their skills for self-directed learning, and thinking skills, as well as their academic progress. The study gathered data from 41 schools, with 117 students involved.

The adapted curriculum and the Learning Progression Framework adopted for the NSS students with intellectual disabilities has been well received and is now prompting special schools to extend the new curriculum development approaches used at senior level to primary and junior secondary levels. The success of the adapted curriculum at senior secondary level has also helped identify a need to develop a coherent 12-year special education curriculum for those with intellectual difficulties. As part of this work, assessment frameworks for the subjects in the basic education curriculum should be developed so teachers can track progress for pupils throughout their years of study in special schools.

The potential for developing and offering accreditation for students reaching the end of their Senior Secondary education in special schools should be explored with parents, students and other stakeholders. Approaches to transition planning should be developed to help to prepare students completing the Senior Secondary education in special schools for a greater range of exit pathways.

To ensure all students could access the new HKDSE Examination in 2012, special arrangements were made to cater for 1,056 candidates with special needs, in 63 special examination centres.

Further evaluation is needed to see the impact of the NSS on other students with special educational needs, in particular those in ordinary schools.
Stretching the gifted

Catering for diversity includes providing sufficient challenge for the gifted students who excel, or possess the potential to excel, in one or more areas, such as general education, specific academic studies, visual and performing arts, leadership, creative thinking, or physical ability.

Of the 385 secondary schools responding to the “Gifted Education Satellite Study”, 62% had developed school-based gifted education provision.

In general, respondents held positive views on gifted students' performance in the Seven Learning Goals. While one third of the schools catered for the gifted through differentiated teaching and learning in regular classrooms, the rest were found to offer provision in pull-out form outside their normal classes. The study also indicated that schools needed to improve their mechanisms for identifying gifted students, setting up talent pools of students, and evaluating their performance. Less than half of schools had set up such mechanisms. Awareness of the significance of gifted education varied, with some schools found to have limited understanding of gifted education.

Time was also identified as a constraint. Schools fed back that activities for the gifted needed to compete with other after-school academic, OLE and Applied Learning activities, including those held on Saturdays.

More than half of secondary schools have made use of the financial and curriculum resources from the Government for gifted education. The number of secondary schools applying for funds under the Diversity Learning Grant has steadily increased, from 233 secondary schools in 2009/10-2011/12, to 288 for 2011/12-2013/14. The implementation of gifted education is summarised in the following table.
Figure 16

Implementation of school-based gifted education (GE) in secondary schools

<table>
<thead>
<tr>
<th>Planning, programming and provision for gifted education</th>
<th>Secondary schools (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have school-based GE provision</td>
<td>62%</td>
</tr>
<tr>
<td>Have designated teacher/team assigned to co-ordinate school-based gifted provision</td>
<td>56%</td>
</tr>
<tr>
<td>Have established identification mechanism to select students for GE programmes</td>
<td>47%</td>
</tr>
<tr>
<td>Have a mechanism to evaluate school-based GE programmes</td>
<td>27%</td>
</tr>
<tr>
<td>Have set up a talent pool of students</td>
<td>30%</td>
</tr>
<tr>
<td>Involve parents in school-based GE provision</td>
<td>6%</td>
</tr>
<tr>
<td>Have curriculum differentiation for the gifted</td>
<td>32%</td>
</tr>
<tr>
<td>Have GE provision in regular classes</td>
<td>32%</td>
</tr>
<tr>
<td>Offer pull-out provision for the gifted</td>
<td>65%</td>
</tr>
<tr>
<td>Offer training on generic skills outside regular classes</td>
<td>82%</td>
</tr>
<tr>
<td>Offer advanced training on Key Learning Areas outside regular classes</td>
<td>75%</td>
</tr>
<tr>
<td>Nominate students to attend off-site GE programmes</td>
<td>71%</td>
</tr>
<tr>
<td>Nominate students to participate in territory-wide, cross-border or international competitions</td>
<td>76%</td>
</tr>
<tr>
<td>Stream students according to abilities</td>
<td>79%</td>
</tr>
<tr>
<td>Group students in class according to abilities</td>
<td>65%</td>
</tr>
<tr>
<td>Make arrangements for acceleration, e.g. grade skipping, subject skipping, mentoring, credit-bearing courses</td>
<td>48%</td>
</tr>
<tr>
<td>Hire services to conduct school-based pull-out programmes</td>
<td>46%</td>
</tr>
<tr>
<td>Allocate a budget for GE</td>
<td>36%</td>
</tr>
<tr>
<td>Make use of different financial resources for GE</td>
<td>57%</td>
</tr>
</tbody>
</table>

Source: “Gifted Education Satellite Study”. A total of 385 secondary schools, or 68% responded to the survey.
C4. Global student mobility through smooth articulation to multiple pathways

The NAS seeks to enable students to progress smoothly from the NSS to further studies and employment, locally, in Mainland China, and internationally. Such pathways include progression to vocational training and sub-degree education, or undergraduate study, depending on levels achieved in the HKDSE and students’ career aspirations.

2012 NSS graduates progress to multiple pathways

Around 80% of the 47,853 day school candidates who qualified for Hong Kong undergraduate and sub-degree study in 2012 actually enrolled in such courses within Hong Kong, as shown in Figure 17. Many of the remaining 20% who achieved these grades, as well as other candidates, opted to study outside Hong Kong. A total of 23%, or 16,507, of day school candidates were admitted to bachelor level studies in UGC-funded or self-financing programmes in Hong Kong.

Figure 17

Intake of New Senior Secondary (NSS) graduates to degree and sub-degree courses in Hong Kong in 2012/13*

<table>
<thead>
<tr>
<th>Full-time programme</th>
<th>Actual intake of NSS graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Grants Committee-funded (UGC-funded) degree</td>
<td>13,596</td>
</tr>
<tr>
<td>Locally-accredited self-financing degree</td>
<td>2,911</td>
</tr>
<tr>
<td>UGC-funded sub-degree</td>
<td>1,202</td>
</tr>
<tr>
<td>Publicly-funded Vocational Training Council sub-degree</td>
<td>4,282</td>
</tr>
<tr>
<td>Locally-accredited self-financing sub-degree</td>
<td>16,122</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>38,113</strong></td>
</tr>
</tbody>
</table>

* Provisional figures. Excludes The Hong Kong Academy for Performing Arts (HKAPA) students. The total intake to the HKAPA was 138 for both Hong Kong Diploma of Secondary Education and Hong Kong Advanced Level Examination graduates.

A survey of NSS graduates distributed by schools in autumn 2012 indicated that around 88% of the 59,871 respondents from 432 schools (91% of all schools) continued to further studies locally or outside Hong Kong. Around 7% of respondents went outside Hong Kong, and 8% to employment. Their pathways are shown in Figures 18a and 18b.
For degree courses, UGC-funded institutions developed a scoring system for HKDSE results, with a variation between institutions of weightings for individual subjects as well as the value of additional electives, Applied Learning and the Student Learning Profile. The admissions scores for 2012, for the eight UGC-funded institutions and the Open University of Hong Kong, have been published on the Joint University Programmes Admissions System (JUPAS) website.
### Calculation of admission scores for initial prioritisation of applicants

<table>
<thead>
<tr>
<th>Subjects counted in the calculation</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 core subjects + 1 best elective</td>
<td>CityU, HKBU, HKIEd, LingnanU, PolyU</td>
</tr>
<tr>
<td>4 core subjects + 2 best electives</td>
<td>HKU, HKUST, CityU</td>
</tr>
<tr>
<td>4 core subjects + 1 best elective + bonus points for 6th &amp; 7th subjects</td>
<td>CUHK</td>
</tr>
<tr>
<td>Any best 5 subjects</td>
<td>PolyU, HKU</td>
</tr>
<tr>
<td>Chinese &amp; English + any best 3 subjects</td>
<td>PolyU</td>
</tr>
</tbody>
</table>

Note: Different programmes within the same institution may use different formulae. CityU = City University of Hong Kong; CUHK = The Chinese University of Hong Kong; HKBU = Hong Kong Baptist University; HKIEd = The Hong Kong Institute of Education; HKU = The University of Hong Kong; HKUST = The Hong Kong University of Science and Technology; LingnanU = Lingnan University; PolyU = The Hong Kong Polytechnic University. (Information as at February 2013)

Data from higher education institutions has shown that the majority of students accepted for local undergraduate courses in 2012 had studied three NSS electives. It is therefore important that schools provide opportunities for students who wish to do so to study this number.

While there is now smooth articulation from secondary to further studies through multiple pathways, the review of higher education institutions’ selection processes indicates that there is a need to further promote the value of OLE and the Student Learning Profile, or related summary information such as the JUPAS ‘Other Experiences and Achievements in Competitions/Activities (OEA)’ Form for use in university admissions, as well as greater recognition of Applied Learning.

“There are many candidates with the same HKDSE results. OLE and the Student Learning Profile will be among the tie-breakers for university admission. Students should take the preparation of the Student Learning Profile seriously.”

- Head of department at a local university

“University admission takes a serious look at individuals’ qualities, including academic and non-academic. We wish that students could unleash their potential and at the same time enjoy their four-year university life. Therefore, we encourage NSS students to try out more activities and understand their own strengths and interests. OEA and the Student Learning Profile have given students the opportunity to reflect on their future pathways.”

- Local university admissions director
Gateway to Mainland China and international studies

The non-local recognition for the HKDSE established since 2008 enabled several thousand HKDSE holders to be accepted to a wide range of institutions outside Hong Kong, for degree and post-secondary study. In the “Survey on 2012 Secondary 6 Students’ Pathways”, around 7% of respondents indicated that they had gone to study outside of Hong Kong, with the UK followed by Mainland China the most popular destinations, as shown in Figure 20.

Leading universities, such as Oxford and Cambridge in the UK, Ivy League universities such as Yale in the USA, and Peking University in Mainland China, offered places to high-performing candidates.

Figure 20

Global passport: 2012 New Senior Secondary (NSS) graduates studying outside Hong Kong

![Pie chart showing study destinations]

Source: “Survey on 2012 Secondary 6 Students’ Pathways”.

Figure 21, sourced from Mainland China and international agencies in Hong Kong, shows the general admissions requirements of universities in some key overseas study destinations, for both three and four-year undergraduate programmes.
**Figure 21**

General admission requirements and acceptance patterns for Mainland China and overseas universities

<table>
<thead>
<tr>
<th>Country</th>
<th>System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>On average, most institutions require Level 3 to Level 4 in three to five subjects. Some institutions accept English Language at Level 4 for admission. Some require Level 4 and Level 5 in four or more subjects.</td>
</tr>
<tr>
<td>Canada</td>
<td>On average, many Canadian institutions require Level 3 to Level 4 in three to five subjects for admission. Some require Level 4 and Level 5 results in five or more subjects.</td>
</tr>
<tr>
<td>Mainland China</td>
<td>Admission requirements by Mainland institutions in the Pilot Scheme range from an average of 3322 to 4444 or above.</td>
</tr>
<tr>
<td>United Kingdom (UK)</td>
<td>On average, UK institutions require Level 4 to Level 5 or above in three to five subjects. Some institutions accept Level 3s. The most competitive require Level 5 to 5* in three or more subjects. Offers are normally based on the published requirements for individual institutions and courses.</td>
</tr>
<tr>
<td>United States of America</td>
<td>On average, many USA institutions require Level 3 to Level 4 in four subjects, though it is also common for institutions to confirm offers based on students’ applications and SAT results.</td>
</tr>
</tbody>
</table>

**C5. Supporting students’ decision-making on their next steps**

Schools, post-secondary institutions and other agencies, supported by the EDB, have worked hard to ensure that students could be well-informed in their decision-making related to further study and their careers, and in preparing applications for the multiple pathways available to them, both locally and overseas. This is included in the Career-related Experiences strand of OLE.

With schools catering for a much greater diversity of students, the role of career guidance personnel has taken on added importance.

The Hong Kong Association of Careers Masters and Guidance Masters (HKACMGM) has played a key partnership role in developing and sharing professional knowledge among its members in order to support students in their career planning and choices.

A wide range of resources is made available to students, including the “e-Navigator: Multiple Pathways under the New Academic Structure” career exploration tool, developed by the HKACMGM and the EDB to help students search for programme information across different local institutions and levels, such as degrees, Higher Diplomas and Associate Degrees.
Students can access information about other programmes from the Qualifications Register. The e-Navigator, with web, App and mobile phone options, recorded around 40,000 downloads and 40,000 unique website users in 2012.

There are many examples of good practice, as seen in feedback from students.

**Student voice**

“The school has arranged many career talks for us. During the summer vacation in Secondary 4, the school briefed us about our future pathways and the HKDSE, as well as other exams that we may take, such as IELTS for English. Teachers keep informing us on further studies, including overseas, Mainland and local institutions.”

The Association has also worked closely with international agencies and the EDB to increase understanding of the admissions processes for studying overseas.

The review has confirmed the importance of career-related services, as shown in Figure 22 in which students rated the advice and information available in schools among the top three sources of support in terms of their usefulness.

Curriculum development visits have identified this as an area for further development, with a need for a more holistic and personalised approach, and more timely information. Studies conducted by local education professional associations (e.g. study by the Hong Kong Federation of Education Workers) reported consistent findings where students expressed the need for more information on further studies, interview skills, qualifications for different trades and industries, and careers counselling.

Students need to start their planning early in the senior secondary years so they can choose elective subjects based on their career goals.
### Feedback from New Senior Secondary (NSS) graduates on the usefulness of various forms of support for further studies and career choices

<table>
<thead>
<tr>
<th>Support Type</th>
<th>Percentage Useful/Very Useful</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parental support</td>
<td>52</td>
</tr>
<tr>
<td>Support measures provided by Education Bureau</td>
<td>53</td>
</tr>
<tr>
<td>Support from Non-governmental Organisations</td>
<td>59</td>
</tr>
<tr>
<td>Peer support and influence</td>
<td>69</td>
</tr>
<tr>
<td>Individual/group advice and counselling provided by teachers</td>
<td>74</td>
</tr>
<tr>
<td>Information provided by institutions directly to students</td>
<td>80</td>
</tr>
<tr>
<td>Timely provision of information from institutions and agencies via schools</td>
<td>84</td>
</tr>
</tbody>
</table>

SECTION D  CONCERTED EFFORT FOR SYSTEM-WIDE CHANGE

The strengths of our education system, supported by a strong family culture that values education, are widely acknowledged, both locally and in international studies, and have been crucial to the successful implementation of the NAS and NSS.

D1. Building on strengths

Among these important pillars:

- We have a strong family culture that supports diligence in studying. In general, students, with strong parental support and influence, strive to study hard.

- There are clear learning expectations in the education and curriculum reform programme, which focus on developing students’ learning to learn capabilities, as well as providing a broad and balanced curriculum with diversified choices to cater for the different interests, aptitude and abilities of students. A wide range of support measures for teachers and schools are provided.

- There is a hard-working professional culture among school teachers and principals. Curriculum leadership and professional development have been strengthened considerably in recent years.

- Strong communications and partnerships have been initiated by the Government, with universities, schools, parents, the media, professional bodies and the business sector. These have ensured that challenges could be resolved during the course of implementation of the education reform programme.

These strengths are partly reflected in Hong Kong’s performance at the top of international student assessments such as the OECD’s Programme for PISA, and the Trends in International Mathematics and Science Study (TIMSS) and Progress in International Reading Literacy Study (PIRLS) conducted by the International Association for the Evaluation of Educational Achievement (IEA).

The support, skills and dedication of principals, panel heads and teachers, and their readiness to develop new professional skills in order to raise the quality of students’ learning, have been critical to implementing the far-reaching changes involved in the NSS and NAS.

The following sections review the process behind the implementation, and the impact that changes at school level have had in further raising the professionalism of our school leadership and teaching staff, as well as some challenges still to be addressed.
D2. Implementing change

Implementing the NSS has involved school-wide changes in how teachers plan and work together to develop and deliver the new curriculum and approach to assessment, as well as to develop new professional skills. It is a whole-school approach that differs from the previous subject-level focus that centred on examination preparation.

Whole-school curriculum leadership

Data collected from schools between the 2009/10 and 2011/12 school years as well as school reviews and focus inspections indicated that the majority of schools had effectively put in place processes that not only supported the NSS but were turning schools into professional learning communities.

The NSS is now the major focus of school development plans for most schools. School reviewers have noted a practice that planning is closely linked to its aims, by focusing on:

- Enhancing students’ study skills
- Improving assessment modes
- Improving students’ learning
- Catering for learner diversity
- Strengthening library support
- Enhancing flexibility of subject combinations
- Reviewing the junior curriculum for a smoother interface between junior secondary and senior secondary curricula.

Around 80% of schools that have undergone External School Review (ESR) since 2009 have ensured that there is a smooth transition between the junior and senior secondary years, with foundations of knowledge for the NSS established, as well as generic skills through activities such as project learning.

The great majority of teachers “slightly agreed”, “agreed” or “strongly agreed” that the Secondary 6 curriculum in their school was planned in such a way that the learning goals could be achieved, with views summarised in Figure 23 below.
Secondary 6 teachers' views on what the S6 curriculum can achieve in their schools

<table>
<thead>
<tr>
<th>Activity</th>
<th>Total agreement (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enables students to develop positive values and attitudes</td>
<td>82</td>
</tr>
<tr>
<td>Enhances students' generic skills</td>
<td>82</td>
</tr>
<tr>
<td>Enables students to undertake in-depth study through extended parts/ elective modules</td>
<td>77</td>
</tr>
<tr>
<td>Broadens students' knowledge base</td>
<td>88</td>
</tr>
</tbody>
</table>

Note: Between 31% and 41% of teacher respondents indicated "slight agreement" on what the Secondary 6 curriculum could achieve in these areas. Source: "New Senior Secondary Curriculum Implementation Study 2011".

Introducing student-centred time-tableing

Through whole-school planning, schools have, in general, been able to deliver a broad and balanced curriculum through their timetable planning.

In the majority of schools, time-tableing is now focused on students' diverse interests and learning needs, by offering a flexible range of subject choices. On average, schools enable students to choose from 11 to 12 elective subjects. In addition, more than half of all schools offer Applied Learning options.

Holistic planning for OLE takes place in most schools, providing students with learning time for different activities for Moral and Civic Education, Community Services, Aesthetic Development, Physical Development and Career-related Experiences, according to feedback from school reviews, as well as from schools themselves. Time is also allocated for students to prepare the Student Learning Profile.

Catering for learner diversity

The fact that the full range of students can now complete senior secondary education is one of the most significant changes in the NSS. In curriculum planning, as well as learning, teaching and assessment practices at classroom level, schools need to respond to the greater diversity of academic ability among students in a school.

As already seen, at the curriculum level, most schools view Applied Learning as a useful means for meeting different learning needs. Gifted education is also widely provided for, though most commonly outside normal school hours. The great majority of teachers claimed to spend time adapting their lessons based on students’ abilities and interests, rather than relying entirely on the textbook (See Figure 24).
However, survey data and school review and focus inspection reports indicate that catering for diversity is a challenge for many teachers, and an area that requires further professional development and support. It has been found to result in a heavy workload for teachers, as teachers need to address, for example, the diversified language abilities of their students, the different prior knowledge of students, different levels of mastery of theories and practical skills, and different cognitive abilities. Teachers may need to respond, for instance, by offering extra lessons, preparing extra guidelines, and ensuring the appropriate sequencing of learning and teaching activities for particular students. Increase in teacher workload to address learner diversity in the classroom has also been reported in studies conducted by school councils and professional associations (e.g. studies by the Hong Kong Association of the Heads of Secondary Schools [HKAHSS], the Joint Committee of Hong Kong Secondary School Councils and Secondary School Principals' Associations of 18 Districts [HKSSC & SSPA-18] and the Hong Kong Subsidised Secondary Schools Council).

The figures below show that in some or most lessons, the majority of teachers acknowledged the different learning needs of their students. Around two-thirds of students agreed that their teachers used appropriate praise and encouragement, but less than half agreed that in some or most lessons their teachers encouraged those with low academic ability and provided them with opportunities to participate.

Focus inspections suggested that more professional development was needed. For the Science Education KLA, very limited measures to cater for diversity in the senior secondary levels were observed in the schools inspected. The common arrangement noted was extra tutorials after school hours. For Personal, Social and Humanities Education (PSHE) KLA, teachers were observed to adjust the curriculum, adopt different teaching practices, and provide additional support for students’ of different abilities. But inspectors identified room for improvement for PSHE KLA in teachers’ questioning skills, understanding of students’ progress, and in designing graded learning tasks to better cater for diverse learning needs.

For the English Language Education KLA, catering for learner diversity remained an area for improvement in the majority of schools inspected. Diversity had one of the lowest ratings in lesson observations. Common weaknesses observed in English lessons included:

- Lack of teacher awareness of individual needs, resulting in a lack of differentiated instruction
- Insufficient attention paid to students’ immediate needs and corresponding adjustment of the teaching tempo and scaffolding to help students learn better
- Lack of diversified strategies, specific feedback that facilitates learning, and following up on students’ responses to help them improve.
The "Applied Learning Satellite Study" found that Applied Learning was effective in offering diverse learning programmes to address students’ diverse interests and needs. However, it was also observed that the full potential of Applied Learning in catering for learner diversity had not yet been realised because the combination of Applied Learning courses and elective subjects in some schools was not flexible enough. Schools are encouraged to enhance the subject combinations available and the support they give to students in making their subject choices.
Catering for diversity also includes being able to meet the learning needs of students who do not speak Chinese. Responses from principals and panel heads indicated that schools were making efforts to cater for NCS students (Figure 26), though significant numbers only “slightly agreed” this was the case. A total of 44% of principals “agreed” or “strongly agreed” that their schools provided supportive measures for this group of students, while 50% of panel heads “agreed” or “strongly agreed” that teachers adapted teaching content to meet their needs. Feedback has also been received that some Applied Learning courses should be made available in English to better cater for this group of students.

Figure 26
Catering for diversity: views of principals and panel heads on support given to Non-Chinese Speaking (NCS) children

Gender-related issues should also be considered. As seen in sections B2 and C1, significant differences are apparent in the subject choices that male and female students are making, as well as in examination performance. For example, Physics attracted more than double the number of male candidates over female (10,651 compared with 4,582) while male candidates accounted for nearly three quarters of those who sat the Algebra and Calculus option for Mathematics Extended Part.

In examination performance, 76% of female candidates met the minimum requirements for sub-degree study, compared with 63% of males. Female candidates also outperformed males in meeting minimum requirements for local publicly-funded bachelor degree courses, with 45% of females achieving the necessary grades, compared with 30% of males. As already seen, the gap narrows at the highest level of performance, with 7.4% of females achieving the core subjects at levels 3322 or above and two elective subjects at Level 5 or above, compared with 7.9% of male candidates.

For the core subjects, the greatest differences in performance between the genders were in the Chinese Language and English Language subjects, for which students are required to achieve a minimum of Level 3 in each subject to qualify for admission to UGC-funded degree courses (Figure 27).
For Category B subjects, data indicated a gender difference in both participation and performance. According to HKEAA examination statistics, female students accounted for 57% of the subjects assessed. Overall, females performed better, with 30% achieving “Attained with Distinction” compared with 17% of male in subjects assessed (Figure 28).

**Figure 27**

Candidates’ performance in the 2012 Hong Kong Diploma of Secondary Education (HKDSE) Examination, core subjects, by gender

<table>
<thead>
<tr>
<th>Category A subject</th>
<th>Gender</th>
<th>Number sat</th>
<th>Level 5+</th>
<th>Level 3+</th>
<th>Level 2+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinese Language</td>
<td>Male</td>
<td>34,446</td>
<td>1,962</td>
<td>14,026</td>
<td>25,025</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>35,098</td>
<td>3,965</td>
<td>20,712</td>
<td>30,151</td>
</tr>
<tr>
<td>English Language</td>
<td>Male</td>
<td>34,436</td>
<td>1,930</td>
<td>14,828</td>
<td>25,268</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>35,277</td>
<td>3,489</td>
<td>20,086</td>
<td>29,959</td>
</tr>
<tr>
<td>Liberal Studies</td>
<td>Male</td>
<td>34,490</td>
<td>1,604</td>
<td>22,172</td>
<td>30,072</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>35,231</td>
<td>3,787</td>
<td>28,424</td>
<td>33,252</td>
</tr>
<tr>
<td>Mathematics (Compulsory Part)</td>
<td>Male</td>
<td>34,275</td>
<td>5,168</td>
<td>20,253</td>
<td>27,391</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>35,024</td>
<td>3,248</td>
<td>19,333</td>
<td>27,811</td>
</tr>
</tbody>
</table>

Source: Hong Kong Examinations and Assessment Authority.

**Figure 28**

Candidates’ performance in the 2012 Hong Kong Diploma of Secondary Education (HKDSE) Examination, Category B Applied Learning subjects, by gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Number of subjects assessed</th>
<th>Attained with Distinction</th>
<th>Attained or above</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Category B subjects</td>
<td>Male</td>
<td>2,061</td>
<td>347 (16.8%)</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>2,685</td>
<td>809 (30.1%)</td>
</tr>
</tbody>
</table>

Source: Hong Kong Examinations and Assessment Authority.
These gender differences will need monitoring, at system and school levels. While international student assessments indicate that females in general outperform males in reading literacy, it will be important for schools to address the learning needs of male students so that this performance gap does not limit their opportunities to progress to higher levels of learning. Schools can also take measures to ensure there is no bias in the subjects that male and female students are encouraged to pursue.

Overall, greater learner diversity was cited by principals, panel heads and teachers as one of the main factors hindering the implementation of the NSS. The review responds to this, by giving schools more flexibility in how they manage curriculum time, through adjustments to the curriculum and assessment, and increased support measures.

D3. Management of resources

Most schools have now adopted a whole-school approach to making use of resources to support the NSS, including adjusting their school facilities, staff planning, and provision of learning and teaching materials.

Upgrading school facilities and learning and teaching materials

In most schools, the NSS curriculum has been accompanied by an upgrading of the learning environment. School reviews have found that principals and councils have ensured that various changes have been made in facilities, such as altering classroom settings, updating equipment, enriching library resources, and rearranging the use of space within a school. The traditional image of a school has changed to an environment that can support the more student-centred learning of the NSS. Learning is no longer confined to the classroom.

School libraries have taken on a pivotal role as resource areas for knowledge and information. Most schools now have libraries that have physical and virtual environments for students to engage in enjoyable reading and enquiry-based learning. Teacher librarians manage both traditional printed materials and e-resources and have built strong partnerships with subject teachers.

In the “NSS Study 2011”, the vast majority of teachers indicated that the extensive learning and teaching resources developed for the NSS had met their needs. A total of 85% of Secondary 6 teachers indicated that they had received adequate learning and teaching resources while 92% indicated that they also made school-based adaptations to existing materials in some or most lessons. Feedback from curriculum development visits suggested that various materials made available to schools to implement the NSS were well received. These included booklets, examples of SBA tasks, resource packages, web-based resources and assessment banks.
Managing human resources

The NSS has had a significant impact on how human resources are now planned and managed, according to findings from school reviews. Schools have been advised to adopt flexible groupings for NSS subjects. To support this, the EDB increased the class-to-teacher ratio before the implementation of the NSS, and has been disbursing different recurrent and one-off cash grants to facilitate schools in implementing the NSS curriculum. Schools can flexibly deploy these grants, such as the Senior Secondary Curriculum Support Grant, Diversity Learning Grant, and the Liberal Studies Curriculum Support Grant, to hire teachers and teaching assistants, as well as to fund other learning and teaching resources.

From the 2012/13 the class-to-teacher ratio for Secondary 4 to 6 has improved from 1.9 teachers per class to 2.0. Schools have maintained average teaching groups for 16 out of 24 NSS subjects at 25 students or below. Meanwhile, student-to-teacher ratio in secondary schools has improved from 18.0:1 in 2005/06 to 14.5:1 in 2012/13. The number of students allocated to each Secondary 1 class has been reduced from 38 in 2008/09 to 34 in 2012/13. As a result of demographic decline and the various Government support measures it is expected to fall further, to 30 by the 2015/16 school year for the majority of schools.

Most schools have effectively planned and coordinated their staffing to meet the needs of the NSS, recruiting teachers for new subjects such as Liberal Studies and BAFS. Some have employed outside tutors for elements of OLE, such as music and dance classes for Aesthetic Development. Some have recruited Chinese, English and Mathematics teachers in order to carry out split class or group teaching. A small number of schools have further deployed additional staff, for example as teaching and activities assistants, to prepare teaching materials for students with special educational needs.

D4. Targeted professional development

The readiness of teachers to engage in professional development has been cited by international studies such as the McKinsey report *How the World’s Most Improved School Systems Keep Getting Better* (2010) as an essential ingredient to the success of Hong Kong’s reforms.

The EDB has worked closely with schools, higher education institutions and other agencies to support such professional development in the Hong Kong teaching community.

Training provision expanded

More than 2,500 projects have been delivered to support schools in preparing for the reform and supporting teachers’ professional development and the curriculum leadership of school principals and middle managers. The “NSS Study 2011” shows that virtually all Secondary 6 teachers have participated in professional development activities, while three-quarters are now sharing good practices with peers from other schools. Training opportunities, in general, have been well received by teachers. Indeed, they have indicated they would like more, and that further training is important for the next stage of development for the NSS.
E-learning boosted

Information and communication technology has a key role in supporting student-centred learning. To harness the use of IT for learning and teaching, more than 6,000 teachers have attended courses on e-learning and 2,000 have attended courses in e-leadership and management.

EDB-schools partnership enhanced

Another important strategy has been the partnerships that have been built up between the EDB and schools in leading the curriculum development. Focus group interviews with teachers indicated that seconding of teachers, through the Seconded Teachers Strategy, to act as curriculum developers and facilitators of teacher networks was a positive initiative, building a crucial bridge between the EDB and schools and helping to develop and share knowledge for the NSS. School-based curriculum development support has reached more than 80% of secondary schools (Figure 29).

Figure 29

<table>
<thead>
<tr>
<th>Support programmes</th>
<th>Number of secondary schools receiving support (2009/10 – 2012/13)</th>
</tr>
</thead>
<tbody>
<tr>
<td>School Support Partners (Seconded Teacher) Scheme</td>
<td>43</td>
</tr>
<tr>
<td>Professional Development Schools Scheme</td>
<td>107</td>
</tr>
<tr>
<td>University-School Support Programmes</td>
<td>259</td>
</tr>
<tr>
<td>Language Learning Support</td>
<td>541</td>
</tr>
<tr>
<td>School-based Curriculum Development (Secondary)</td>
<td>437</td>
</tr>
</tbody>
</table>

Source: Education Bureau.

School initiatives: a key role

Much of the work to prepare for the NSS has taken place within schools themselves. Schools recognise the importance of professional development for building teachers' capacity. Through collaborative lesson planning, peer observation and professional development courses, most teachers have increased their understanding of curriculum development and enhanced their personal growth, the EDB’s support service records show.

Professional learning communities, identified in the McKinsey report, among others, as a key feature of systems that keep improving, have taken root in schools. There is evidence from the interaction between schools, sectors of education and the EDB that a new generation of curriculum leaders has emerged.
Professor John MacBeath, Professor Emeritus at the University of Cambridge and Director of Leadership for Learning: The Cambridge Network, who has acted as an advisor for the review, notes the effectiveness and significance of professional development programmes. He points out that survey respondents have given particular credit to progress in:

- School-based curriculum development
- Curriculum leadership
- Change management
- An increased use of professional discourse, or language, about education

“Professional development holds the key to progressive change and the priority given to this by the Bureau has been rewarded by a high degree of ‘buy-in’. Development programmes have been seen as effective in a range of ways – developing professional and pedagogical knowledge, enhancing self-confidence, and promoting the sharing of good practices”

- Professor John MacBeath

**Ongoing development**

Teachers have enthusiastically participated in professional development activities, with applications and enrolment often over-subscribed. Most recognise that professional development is ongoing, with teachers identifying a number of areas for further focus, such as learning and teaching strategies, catering for learner diversity and supporting students with special educational needs. The need for professional development courses on implementing Applied Learning has also been expressed.

**D5. A new culture of learning, teaching and assessment is emerging**

The NSS and the growing strengths of schools as learning communities are enhancing the quality of teaching, resulting in a better balance between direct teaching and enquiry learning that can best enhance student learning outcomes. This represents a shift away from approaches that traditionally characterised teaching in Hong Kong, with their heavy reliance on textbooks and rote learning.

However, observations from focus inspections indicated that teachers could still go further in achieving this balance so that students could develop in-depth subject knowledge as well as extend their skills in problem solving, independent learning, and critical and creative thinking. For example, they observed that group discussions and presentations were frequently used in some lessons, particularly in PSHE, while in some others, such as English Language teaching, students were given fewer opportunities to actively participate or express their views.
Inspectors for the English Language Education KLA found that while cooperative learning was increasingly adopted as a strategy for learning and teaching in smaller classes, teaching in smaller classes was not found to be particularly successful in changing the culture of learning and teaching. A teacher-led approach, with limited room for students’ active participation, was found to be prevalent.

Figures 30 and 31 below indicate teachers’ and students’ views on the mixed modes of teaching they use and experience.

**Figure 30**

**Balancing direct teaching and enquiry learning: teachers’ views on the methods they use in most or some of their lessons**

<table>
<thead>
<tr>
<th>Method</th>
<th>Most/some lessons (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I guide students to connect new knowledge with relevant learning experiences</td>
<td>78</td>
</tr>
<tr>
<td>I develop students’ reflective ability by guiding them to think in depth</td>
<td>84</td>
</tr>
<tr>
<td>I ask students to report and share their learning processes and outcomes</td>
<td>61</td>
</tr>
<tr>
<td>I encourage students to actively engage in discussion</td>
<td>80</td>
</tr>
<tr>
<td>I provide opportunities for students to learn in groups</td>
<td>71</td>
</tr>
<tr>
<td>I encourage students to search information from the Internet</td>
<td>63</td>
</tr>
<tr>
<td>I encourage students to co-construct knowledge with me (e.g. gather information and learn new things together)</td>
<td>61</td>
</tr>
<tr>
<td>I provide opportunities for students to learn some topics through enquiry (e.g. analysing information, conducting surveys, project learning, etc.)</td>
<td>62</td>
</tr>
</tbody>
</table>

Source: “New Senior Secondary Curriculum Implementation Study 2011”. 
Balancing direct teaching and enquiry learning: students’ views on methods used by their teachers in most or some of their lessons

<table>
<thead>
<tr>
<th>Method</th>
<th>In most/some lessons (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use a variety of teaching strategies (e.g. lecturing, group activities or games/competition)</td>
<td>52</td>
</tr>
<tr>
<td>Guide us to connect new knowledge with relevant learning experiences</td>
<td>53</td>
</tr>
<tr>
<td>Encourage us to cooperate/ share our views in class</td>
<td>60</td>
</tr>
<tr>
<td>Ask open-ended questions and encourage us to express different views</td>
<td>61</td>
</tr>
<tr>
<td>Guide us to think and to correct mistakes by ourselves</td>
<td>66</td>
</tr>
<tr>
<td>Encourage us to ask questions</td>
<td>66</td>
</tr>
<tr>
<td>Teach us how to find the main points or ideas</td>
<td>80</td>
</tr>
<tr>
<td>Use a lot of examples to help us understand the lesson content</td>
<td>82</td>
</tr>
</tbody>
</table>

Source: “New Senior Secondary Curriculum Implementation Study 2011”.

Applied Learning also contributes to the emerging balance between direct teaching and student enquiry. Stakeholders considered the learning and teaching strategies and activities were appropriate in providing eye-opening experiences, enabling learning through application and practice in authentic contexts, and encouraging innovation and entrepreneurship.

Developing assessment for learning

The aims of the NSS to foster a better balance in approaches to learning and teaching are matched by aims to promote assessment for learning so that students are not merely judged on their performance, but supported through assessment to understand their development and plan their next learning goals.

Developing assessment for learning, and the SBA component of the HKDSE, has been a key focus for professional development. Between June 2005 and February 2012, around 750 training sessions were held for all 24 Category A subjects, involving around 57,000 teacher-participants, with each teacher attending two or more sessions.

Figure 32a shows that more than 80% of teachers agreed that they were now using strategies that supported assessment for learning in some or most lessons. More than two-thirds of students concurred to experiencing such practices, in some or most lessons (Figure 32b).
Inspectors have observed different types of assessment being used across the KLAs. For example, for PSHE, they saw that students’ performance was tracked and areas for improvement formulated, although there was room for improvement in areas such as evaluating coursework and classroom performance, and using assessment data to inform pedagogy. For English Language Education, inspectors identified that classroom assessment to support student learning had yet to be embedded in daily practice. Weaknesses included poor time management, lack of clear objectives and assessment criteria, inadequate feedback, and lack of follow up on students’ responses.

From the above, there appears to be a need for further professional development and support for teachers in setting quality questions for internal assessment, in order to promote a stronger assessment for learning culture.

**Figure 32a**

Teachers’ views on their assessment practices – percentage agreeing

<table>
<thead>
<tr>
<th>Activity</th>
<th>In most/ some lessons (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I use assessment data or information to identify students’ learning difficulties and to adapt my teaching plan</td>
<td>81</td>
</tr>
</tbody>
</table>

Source: “New Senior Secondary Curriculum Implementation Study 2011”.

**Figure 32b**

Secondary 6 students’ views on their teachers’ assessment practices

<table>
<thead>
<tr>
<th>Activity</th>
<th>In most/ some lessons (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guide us to think and to correct mistakes by ourselves</td>
<td>66</td>
</tr>
<tr>
<td>Clearly tell us the mistakes we have made in our exercises or tests and show us how to make corrections</td>
<td>75</td>
</tr>
<tr>
<td>Point out our strengths and weaknesses after we have expressed our views</td>
<td>67</td>
</tr>
</tbody>
</table>

Source: “New Senior Secondary Curriculum Implementation Study 2011”.

As seen in Section B, and in Figure 33 below, the majority of teachers and students have found that SBA has contributed to their heavy workload. This had also been reported in studies conducted by school councils and professional associations (e.g. HKAHSS, Joint Committee of HKSSC & SSPA-18, the Education Convergence and Hong Kong Professional Teachers’ Union).
The majority of teachers indicated this workload was beyond what they could handle. While the majority agreed that they had been able to implement SBA smoothly, many indicated slight agreement only. Around two-thirds of teachers indicated that their school had provided them with enough support to adequately implement SBA, suggesting room for improvement in a significant minority of schools. While the majority of principals indicated that their schools managed to co-ordinate SBA for different subjects across the year in order to avoid overloading teachers and students, only slightly over half of panel heads expressed this view.

The survey data indicated that SBA was not necessarily perceived as enabling wider assessment for learning. Between 46% and 57% of teachers, and 47% of students, agreed that SBA enabled assessment for learning. Evidence shows that teachers may need further professional support in setting SBA tasks in order to meet both HKEAA requirements and the aims of achieving assessment for learning in classrooms.

While SBA is still valued as an important part of assessment, it will be streamlined in order to improve its effectiveness in supporting the NSS (See Section E).

**Student voice**

“*Usually several subject teachers suddenly asked us to do SBA at the same time. Sometimes we had to do Biology and Chemistry SBA on the same day and then submit SBA of Liberal Studies on the next day. All the SBA will be affected then. If the schedule for SBA could be well organised, we would perform better.*

**Figure 33**

Secondary 6 teachers’ views on the implementation and workload of School-based Assessment (SBA)

<table>
<thead>
<tr>
<th></th>
<th>Total agreement (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have been able to implement SBA smoothly</td>
<td>69</td>
</tr>
<tr>
<td>I can handle the workload brought about by SBA</td>
<td>46</td>
</tr>
</tbody>
</table>

Note: Among the respondents, between 29% and 37% answered “slightly agree” to these questions. Source: “New Senior Secondary Curriculum Implementation Study 2011”.
D6. New funding and resources for the NSS

The success of the reforms has been a government priority. The Government has invested more than HK$2 billion in additional funding to support the implementation of the NSS. Some of the extra funding was earmarked to help schools cater for diversity, and to develop Applied Learning and Liberal Studies.

Schools have made good use of the Diversity Learning Grant to support Applied Learning, special educational needs, and gifted education, with an increasing number of schools applying to this fund each year.

Schools have also made effective use of their existing funding and community resources, such as the Hong Kong Jockey Club Life-wide Learning Fund, and the School-based After-school Learning and Support Programme, to support elements of the NSS, including OLE. However, some schools indicated that they were constrained by limited financial resources for the arrangement of some OLE learning activities.

Some schools have successfully applied to The Quality Education Fund (QEF) to fund projects such as adapting classroom space for Liberal Studies, and for arts and cultural projects that enrich the Aesthetic Development area of OLE.

D7. On-going needs of schools – factors seen as helping or hindering implementation of the NSS

School principals, panel heads and teachers have different views on factors that have had positive or negative impact on the implementation of the NSS curriculum in their schools, as seen in Figure 34a and 34b. Principals held the most positive views compared with panel heads and teachers, reflecting the systemic bias that those closer to the source of practice will have greater the reservations or concerns, as previously noted.

However, in the “NSS Study 2011” there was strongest agreement among the three groups that teachers’ understanding of the NSS curriculum, their professional development for the NSS, and team spirit in schools were the leading factors that have had a positive impact. There was also strongest agreement that greater learner diversity and declining student population had presented negative challenges. This would be due to the resulting pressure on teachers to meet different students’ needs and pressures on schools to compete for students.
Percentage of principals, panel heads and teachers agreeing that the following factors had had a positive impact (weak and strong positive combined) on the implementation of the New Senior Secondary (NSS) curriculum

Figure 34a

Source: "New Senior Secondary Curriculum Implementation Study 2011".
Figure 34b

Percentage of principals, panel heads and teachers agreeing that the following factors had had a negative impact (weak and strong negative combined) on the implementation of the New Senior Secondary (NSS) curriculum

Source: "New Senior Secondary Curriculum Implementation Study 2011".

Implications for workload

Delivering a curriculum, range of subjects and timetable that is focused more closely on students’ interests and needs has obvious implications on workload. Feedback from schools indicates that catering for the greater diversity of students and conducting SBA have frequently resulted in a heavier workload.

Schools have found it challenging to deliver the NSS curriculum within the recommended time of 2,700 hours over the three years. Many teachers have indicated that more time is needed to cover the curriculum content in their subjects.
This feedback has informed the fine-tuning of the NSS curriculum and assessment, as seen later in the report.

D8. Stakeholder support and communications

Whole-system implementation of the NAS and NSS has required careful coordination within schools and across all sectors of education. Curriculum leaders from schools and post-secondary and higher education institutions have worked closely with system level agencies including the EDB, Education Commission, CDC, HKEAA, the wider community as well as other overseas and Mainland facilitating agencies. Together, this community-wide network has supported schools in developing the curriculum, delivering Applied Learning and OLE, conducting the new assessment, ensuring smooth articulation between stages of education, and providing multiple pathways for further studies.

Along with coordination, the NSS implementation has been supported by clear communications on the expectations agreed in the reforms, for schools, students, parents, post-secondary and higher education institutions, the wider community and overseas governments. Multiple channels have been used, including direct engagement with teachers and parents through seminars and workshops, web and print resources, media support and Hong Kong’s overseas offices.

This coordination, and the communication channels established, has enabled the system to respond flexibly to issues as they arise. It has also informed the fine-tuning of the NSS.

A comprehensive communications strategy is now being implemented to circulate this progress report and the details of the fine-tuning, to all stakeholders. For the school sector, different series of workshops, seminars, forums and meetings have been scheduled for school sponsoring bodies, school principals, and frontline teachers to enable a two-way dialogue over the progress of the reforms and the planned changes from the end of April to early July 2013. Dissemination and communication to other major stakeholders have also been planned from April to October, including the post-secondary and higher education sectors, teacher education institutions, non-government organisations, employers, parents, overseas partners, textbook publishers, as well as students, through different means such as e-mails, factsheets, Apps and different platforms such as meetings, briefing sessions and visits, and the use of e-platforms.

This is a way of working that will continue in its next stages of implementation of the NSS. It represents a fundamental change, from a top-down approach to combining distributed leadership through collaboration and some bottom-up initiatives.
SECTION E  NEXT STEPS: FINE-TUNING THE NSS

E1.  Addressing schools’ concerns

Implementing a new curriculum and new strategies for teaching, learning and assessment is a huge task that will inevitably meet many challenges alongside the early successes, as seen in the previous sections of this report. The EDB, CDC and HKEAA have gathered and listened to feedback from stakeholders, including principals, teachers, students, parents, tertiary institutions and employers, in order to be responsive to their concerns. This has been a prime purpose of the review.

The key challenges identified by schools include catering for the much greater diversity of students now remaining in school until the end of secondary education; managing time to cover the full breadth and depth of the new curriculum; implementing SBA; and attending to non-teaching duties. Heavy workloads for teachers, as well as for students, have been a prime concern. In addition, students would like more information and support on study and career pathways.

It is not surprising that these challenges remain at this early stage for such a far-reaching reform. However, these are issues that the EDB, CDC and HKEAA now plan to address in order to further smooth the implementation of the NSS. Some measures have already been implemented, such as adjustments to the Liberal Studies public examination and the circulation of supplementary notes with examples of good practices, to illustrate the breadth and depth of some subjects, as well as related pedagogy. The current Secondary 6 students are benefiting from these in the 2013 HKDSE. As the NAS has involved large scale systemic changes, the scope of the review is wide and it takes time to consolidate the experiences gained before new or fundamental changes are made.

A strategic approach with multiple stages has therefore been adopted. After balanced consideration of the feedback from the school sector and other stakeholders, measures will be taken to address the practical concerns of schools and further facilitate the implementation of the NSS in Secondary 4 in the 2013/14 school year, leading to the 2016 HKDSE Examination. To sustain the reform, good practices will be collected for sharing among schools. For earlier cohorts, proposed changes that do not have major implications on learning and teaching will also be implemented in the 2014 and 2015 HKDSE Examination. As for matters requiring more data collection and deliberation, they will be discussed and feedback will be collected for the medium- and long-term stages, for the 2017 HKDSE Examination and beyond.
E2. Fine-tuning the NSS curriculum and assessment

Immediate measures

Measures for the short-term stage of the review aim at addressing the practical concerns as well as collecting good practices for sharing among schools and sustaining the reform. They are based on the principles and considerations for the NSS curriculum and assessment. Students’ interests always come first and it is important not to jeopardise professional standards and international benchmarking. The principles for curriculum design and assessment, including SBA, will continue to be observed while giving schools more flexibility, space and support in addressing the workload issue as well as catering for learner diversity.

Fine-tuning and updating the NSS curriculum

This will include updating and streamlining some content, and increasing choice within some subjects, in order to provide a better balance in the workload of both teachers and students, as well as to cater for the diversity of students. For example, without compromising the curriculum objectives and international benchmarking, BAFS will be reduced in content by approximately 15% to address practical concerns from frontline teachers and to improve the effectiveness of student learning. The number of elective modules students need to study for Chinese Language will be reduced. Supplementary notes for all subjects will be produced to further clarify the breadth and depth of the curriculum.

Fine-tuning assessment

i) There is an urgent need to address the total workload of teachers and students resulting from SBA, in both quantitative and qualitative terms. While aligning with the underlying principles and changes in the curriculum, SBA will be generally streamlined according to its suitability for various subjects, with the pace of implementation adjusted to best meet the needs of schools and their students. SBA in Chinese Literature, Literature in English, Economics, Ethics and Religious Studies (ERS), Geography, Health Management and Social Care (HMSC), Technology and Living, Tourism and Hospitality Studies, and Music will be deferred until the 2019 HKDSE Examination. SBA will not be implemented in Mathematics and BAFS, subject to regular review, while the SBA of Physical Education will be replaced by practical examinations. For IES in Liberal Studies, submission of process assessment records will be cancelled to benefit Secondary 6 in the 2013/14 school year onwards.

ii) Examination time and paper design will be refined for a number of subjects. For Economics, Geography, History and HMSC, the examination time will be lengthened in line with the depth and breadth of curriculum and assessment. For Chinese Literature, BAFS and Literature in English, the examination time will be reduced with corresponding streamlining in the paper design.

iii) Assessment design will be refined, for Chinese Language, Chinese Literature, Chinese History, BAFS and Literature in English. More question choices will be provided in BAFS from the 2014 HKDSE and in Literature in English from the 2016 HKDSE.
*Increasing flexibility for curriculum and lesson time*

Schools will be given greater flexibility in how they deliver the curriculum, in terms of planning time for the overall curriculum and for individual subjects. The overall time of 2,400 (+/-200) hours is recommended for delivering the three-year NSS curriculum, where schools will have flexibility of plus or minus 200 hours, to meet their individual needs and contexts. They will also have greater flexibility in how they deliver the planned 250 hours for each elective subject. However, the overall standards and curriculum aims for each subject will be maintained.

*Other Learning Experiences*

Schools will have greater flexibility in the time spent for OLE, with a suggested range of 10% to 15% of curriculum time, depending on schools’ needs and contexts. The focus should be on the quality of activities rather than the quantity and time spent. Aesthetic and Physical Development should continue to include structured art-related and PE timetabled lessons.

*Student Learning Profile*

More emphasis should be placed on using the Student Learning Profile as a learning or self-planning tool for students’ development and preparing them for future pathways. In the medium term, further streamlining may be conducted to align the Student Learning Profile with admissions requirements for local institutions.

*Applied Learning*

Applied Learning will be updated and improved to keep abreast of the rapid changes in relevant professions. Some Applied Learning courses may be introduced from Secondary 4, along with opportunities for taster courses in that year.

*Medium- and long-term suggestions*

Continuous efforts will be made to deliberate on the medium- and long-term suggestions. Working Groups will be set up for SBA and nine subjects (Chinese Language, Chinese Literature, Mathematics, Liberal Studies, BAFS, Economics, ERS, Geography, and HMSC) to explore their further development and review the curriculum and assessment of the subjects. For example, this will include exploring the feasibility of introducing classical texts and their assessment in Chinese Language, to explore the feasibility of splitting the BAFS subject and/or implementing separate grading for its components, and to explore the further streamlining of IES in Liberal Studies.

The Applied Learning courses will be reviewed to cater for learner diversity, and there will be further exploration into the possibility of reporting students’ results in more levels, communicating with local and overseas institutions for recognition and articulation, and reviewing the moderation mechanism.
As for the HKDSE Examination, further studies will be conducted to see if it can be improved to cater for learner diversity, for example by designing differentiated papers and extended papers, introducing the graded approach to more subjects, introducing half subjects, reporting students’ results in more levels, introducing another tier of qualification to the diploma, and benchmarking with other qualifications.

Measures to encourage schools to accept re-entry to senior secondary classes for early school-leavers will be explored in order to open more pathways for students.

Stakeholders will continue to be engaged in the process to ensure that concerns are addressed without compromising professional principles and standards.

**E3. Qualifications and pathways**

Through existing multi-sectorial collaboration, the EDB will continue to facilitate the provision of more information on further study and employment options for NSS students, including those not attaining Level 2 in five subjects and those who choose to leave school before completing 12 years of education.

**E4. Support measures for schools**

The fine-tuning will be supported by the EDB, the HKEAA and other agencies, for example through professional development programmes, sharing, curriculum resources and guides. Professional learning networks will continue to play an important role in sharing knowledge and skills among teachers.

Good practices in implementing the NSS will be collected and shared, especially those that promote students’ learning to learn capabilities, assessment for and as learning, and that cater for diverse interests, needs and aptitudes.

The work of the EDB’s school-based support services, partnerships with universities and the QEF will be further aligned in order to support the fine-tuning when appropriate.

The EDB will continue to engage in dialogue with schools regarding the overall provision of human and funding resources for schools.

**E5. Striving for continuous improvement for our students**

As discussed above, for the longer term, studies and working groups will be conducted and organised to see if the curriculum and assessment can be further improved, to cater for learner diversity and the changing needs of students and the wider society. The impact of the NAS on the curriculum at post-secondary and degree levels will also be reviewed.

Figure 35 provides an overview of the proposed changes to curriculum and assessment, as well as support to schools, that will address their main concerns.
### Figure 35

Overview of measures responding to concerns of schools

<table>
<thead>
<tr>
<th>Concerns</th>
<th>Curriculum</th>
<th>Assessment</th>
<th>Support measures &amp; others</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clarity of breadth and depth</strong></td>
<td>• Update and revise curriculum content</td>
<td>• Integrate exam papers</td>
<td>• Provide supplementary notes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Improve question design</td>
<td>• Provide Professional Development Programmes (PDPs)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Workload</strong></td>
<td>• Streamline curriculum content in overloaded subjects</td>
<td>• Streamline exam papers</td>
<td>• Provide PDPs</td>
</tr>
<tr>
<td></td>
<td>• Reduce no. of electives taken by students</td>
<td>• Streamline SBA components</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Flexible total lesson hours – from 2,700 hours to 2,400±200 hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Allocate 10-15% of the total curriculum time for Other Learning Experiences, emphasising quality rather than quantity</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Catering for diversity</strong></td>
<td>• Provide more choices for diversity</td>
<td>• Provide more options in exam papers</td>
<td>• Provide exemplars</td>
</tr>
<tr>
<td></td>
<td>• Review provision of Applied Learning courses to provide diversified choices</td>
<td></td>
<td>• Provide PDPs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Enhance school-based support service, networking and sharing</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Priority theme in Quality Education Fund (QEF)</td>
</tr>
<tr>
<td><strong>School-based Assessment (SBA)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Cancel SBA in 3 subjects</td>
<td>• Provide exemplars</td>
<td>• Provide exemplars</td>
</tr>
<tr>
<td></td>
<td>• Defer SBA for 9 subjects</td>
<td>• Provide PDPs</td>
<td>• Provide PDPs</td>
</tr>
<tr>
<td></td>
<td>• Streamline SBA components in Liberal Studies, Chinese Language, English Language and elective subjects</td>
<td>• Enhancing school-based support service, networking and sharing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Replace SBA with practical exam in Physical Education</td>
<td>• Assessment literacy as a priority theme in QEF</td>
<td></td>
</tr>
</tbody>
</table>
MOVING FORWARD TO EXCEL – HONG KONG’s PIONEERING EDUCATION JOURNEY

As this progress report has shown, the New Senior Secondary curriculum and assessment and New Academic Structure are now firmly in place. The outcomes of this phase of the reform programme have, overall, been positive, due to the dedication and hard work of education professionals and the first students to progress through the system. The major aims of extending opportunities and improving the quality of education to equip young people with key learning skills and knowledge for the 21st century are actively being implemented by our schools. However, these are still early days. While Hong Kong is clear in its priorities for education, it is important that the system remains flexible enough to further adapt and improve, and responsive to feedback from schools and the need for change as the wider socio-economic environment evolves.

Hong Kong’s New Academic Structure and New Senior Secondary curriculum and assessment are not static. Their strengths will be derived from regular and ongoing review. The Education Bureau will continue to carefully track their implementation.

The New Academic Structure and New Senior Secondary curriculum and assessment were planned first and foremost around students, their learning needs, and their learning to learn capabilities. This focus, coordinated across the whole education sector, has been key to the early successes of the new system. It will remain central as schools, universities and post-secondary institutions take the next steps forward, working in partnership and supported by the Government, the Hong Kong Examinations and Assessment Authority, the Curriculum Development Council, the Education Commission, parents and the wider community.
Bibliography

The figures cited in this report were drawn from the quantitative and qualitative data collected by the EDB and HKEAA, EDB commissioned studies, and focus group and individual interviews. In drafting this report, reference has also been made to studies by professional organisations, media reports, as well as research and reports by other local and international agencies. Major sources are listed as follows.

Policy Documents


International Studies


69
Education Bureau and Hong Kong Examinations and Assessment Authority Data

Education Bureau: Curriculum Implementation Studies (2009-2012):
- Applied Learning Satellite Study: Study on Applied Learning (2010-12 cohort)
- New Senior Secondary Curriculum for Students with Intellectual Disabilities (NSS(ID) Curriculum) Satellite Study
- New Senior Secondary Curriculum Implementation Study 2011
- Other Learning Experiences (OLE) Satellite Study
- Survey on the Experience of the First Cohort of New Senior Secondary Graduates: Impact of New Senior Secondary Education on Further Studies
- Gifted Education Satellite Study: Territory-wide Baseline Survey on School-based Gifted Education Provision in Hong Kong

Education Bureau: Internal Data (2009-2012):
- 2012 Secondary 6 Students’ Pathway Survey
- Curriculum Development Visits
- External School Reviews and Focus Inspections
- Focus Group Interviews
- Key Learning Areas Reviews
- Survey on New Senior Secondary Subject Information

Hong Kong Examinations and Assessment Authority:
- Benchmarking Studies on International Examinations
- Hong Kong Diploma of Secondary Education Examination Results

Studies by Local Education Professional Organisations

Chinese YMCA of Hong Kong:
- Survey on Senior Secondary Students’ Study and Career Planning (高中生——規劃升學及就業目標) (2011)

Education Convergence:
- Survey on The New Senior Secondary Curriculum Planning (高中課程規劃問卷調查) (2011)
- Survey on The School-based Assessment of Hong Kong Diploma of Secondary Education Examination (中學文憑試校本評核意見調查) (2012)

Hong Kong Association of the Heads of Secondary Schools:

Hong Kong Federation of Education Workers:
- Survey of The Senior Secondary School Teachers’ Views on the Practice Papers from Hong Kong Examinations and Assessment Authority (高中教師看考評局練習卷調查) (2012)

Hong Kong Professional Teachers’ Union:
- Survey on The New Senior Secondary School-based Assessment (新高中校本評核意見調查) (2011)

Hong Kong Subsidized Secondary Schools Council:

Joint Committee of Hong Kong Secondary School Councils and Secondary School Principals’ Associations of 18 Districts: