

The New Academic Structure for
Senior Secondary Education and
Higher Education

— *Action Plan for Investing in the Future of Hong Kong*

Education and Manpower Bureau

May 2005

A Message from Secretary for Education and Manpower

In October 2004 we launched a 3-month consultation on the design blueprint, timing of implementation and financial arrangements of the new academic structure, which comprises a 3-year school curriculum at senior secondary level and a 4-year undergraduate programme at university. We are grateful to all those who have sent in their feedback or expressed their views on how to take the matter forward. I am pleased that the community has expressed overwhelming support for the new academic structure. To allow the school sector ample time for the preparatory work, we have now decided to implement the new academic structure in 2009.

The changes we are about to embark upon represent a landmark in our education history. We hope to provide all students with the opportunity to receive a higher standard of education, and to provide them with a more suitable curriculum catering to their individual needs and abilities, so as to help them to pave their way to success.

Reforming the academic structure entails wide-ranging changes which have far-reaching implications for the whole community. Success in implementation requires the attainment of the critical pre-conditions including the development of a new senior secondary curriculum, a new public examination and assessment mechanism, smooth interface with university programmes and articulation with different pathways for further studies, vocational training and employment. Success also hinges on the firm commitment and concerted efforts of the education sector and the community as a whole.

This Report sets out the road map for introducing the new academic structure. It guides us in our preparation in the next few years, and takes us forward to the second stage of consultation with the school sector on details regarding the design of the curriculum and assessment frameworks of the new senior secondary subjects. We will continue our dialogue with stakeholders on various matters where further development is required.

I am delighted that the community has reached a consensus on the future direction of education. The challenge is whether we are willing to make joint efforts and commitment. I am sure we can create a better future for our younger generation if we always have their well-being as our top priority and make concerted efforts to develop our new academic structure.



Professor Arthur K.C. Li
Secretary for Education and Manpower

Acronyms

AL	Advanced Level
API	Announcements of public interest
ASL	Advanced Supplementary Level
C&A	Curriculum and Assessment
CDC	Curriculum Development Council
COC	Career-Oriented Curriculum (pilot of the Career-oriented Studies)
COS	Career-oriented Studies
CPD	Continuing Professional Development
EC	Education Commission
EMB	Education and Manpower Bureau
ESL	English as a Second Language
EYE	Extension of Years of Education
GM	Graduate Master
HI	Hearing impaired
HKALE	Hong Kong Advanced Level Examination
HKCAA	Hong Kong Council for Academic Accreditation
HKCEE	Hong Kong Certificate of Education Examination
HKDSE	Hong Kong Diploma of Secondary Education
HKEAA	Hong Kong Examinations and Assessment Authority
HKedCity	Hong Kong Education City
HKSAR	Hong Kong Special Administrative Region
HUCOM	Heads of Universities Committee
HWFB	Health, Welfare and Food Bureau
IB	International Baccalaureate

IE	Integrated Education
IELTS	International English Language Testing System
IEP	Individualised Education Programmes
IT	Information technology
JSEA	Junior Secondary Education Assessment
KLA	Key Learning Area
MH	Mentally handicapped
MOI	Medium of instruction
NET	Native-speaking English Teachers
NGO	Non-government Organisation
NSS	New Senior Secondary
OECD	Organisation for Economic Co-operation and Development
One Committee	CDC-HKEAA Committee
P1/2/3/4/5/6	Primary 1/2/3/4/5/6
PD	Physically disabled
PISA	Programme for International Student Assessment
PTA	Parent-teacher Association
PYJ	Project Yi Jin
QA	Quality assurance
RASIH	Review of the Academic Structure for Senior Secondary Education and Interface with Higher Education
REO	Regional Education Offices
S1/2/3/4/5/6/7	Secondary 1/2/3/4/5/6/7
SBA	School-based Assessment
SBCTS	School-based Curriculum Tailoring Scheme
SBRSP	School-based Remedial Support Programme

SCOLAR	Standing Committee on Language Education and Research
SEN	Special Educational Needs
SES	Socio-economic Status
SpLD	Specific Learning Difficulty
SRA	Standards-referenced Assessment
SS1/2/3	Senior Secondary 1/2/3
SSPA	Secondary School Places Allocation
SWD	Social Welfare Department
UCLES	University of Cambridge Local Examinations Syndicate
UGC	University Grants Committee
VI	Visually impaired
VTC	Vocational Training Council

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Chapter 1 Introduction – Community Participation in “3+3+4”

Background

1.1 In 2000, the Government of the Hong Kong Special Administrative Region (HKSAR) endorsed the recommendation of the Education Commission (EC) to adopt a 3-year senior secondary and 4-year undergraduate academic system (“3+3+4”) to facilitate the implementation of a more flexible, coherent and diversified senior secondary curriculum. A Working Group was then set up by EC on the Review of the Academic Structure for Senior Secondary Education and Interface with Higher Education (RASIH). In 2003, the Working Group made further recommendations on the development of a new curriculum, assessment and examination and on university admissions. In his 2004 Policy Address, the Chief Executive accepted the recommendations and undertook to consult the public on the implementation details.

Public Consultation – A Multiple-strategy and Multiple-stakeholder Approach

1.2 The Main Document entitled *Reforming the Academic Structure for Senior Secondary Education and Higher Education – Actions for Investing in the Future* was published on 20 October 2004. This was followed by a 3-month period of public consultation to seek the views of different stakeholders from the education and other community sectors on the design blueprint, timetable for implementation and financial arrangements.

1.3 In view of the complexity of the issues and the far-reaching implications for our senior secondary and higher education, it was recognised that a single-round consultation would not be sufficient. The first consultation exercise, which ended in January 2005, focused on the design blueprint including the curriculum and assessment framework, together with the broad frameworks for individual subjects. A second consultation exercise focusing on the

curriculum and assessment details for each subject will be conducted around June 2005. There will be an on-going dialogue with relevant parties as details are developed for Career-oriented Studies (COS) and special education under the new senior secondary (NSS) structure, and for university admission criteria.

- 1.4 A multiple-strategy and multiple-stakeholder approach was adopted in the public consultation exercise with various sectors of the community, which involved both dissemination activities such as publications, web-based information and media publicity programmes as well as interactive activities such as consultation sessions/forums, meetings, school visits, media programmes and telephone conversations.

Consultation Process and Feedback

Dissemination activities

- 1.5 Over 20,000 copies of the Main Document and executive summary and over one million copies of the pamphlet were issued during the 3-month consultation period. In addition, a pamphlet on Liberal Studies was issued to parents of all students. Members of the public were also invited to visit the “3+3+4” Homepage on the Education and Manpower Bureau (EMB) website (<http://www.emb.gov.hk>) to view various documents.
- 1.6 To arouse public awareness of the reform, three announcements of public interest (APIs) were broadcast on television and radio during the consultation period. A series of television and radio programmes, including a mini programme on the RoadShow, were also produced to introduce the new academic structure.

Interactive activities

- 1.7 EMB conducted a total of 115 briefing sessions, seminars or focus group discussions for principals, teachers, parents, school sponsoring bodies, Legislative Councillors and District Councillors. In addition, EMB representatives attended about 60 consultation events organised by various

parties including the Legislative Council, Parent-teacher Associations (PTAs), non-government organisations (NGOs), tertiary institutions, educational, business and professional organisations. Over 20 meetings with staff and students of individual schools as well as representatives from school councils and educational bodies were also arranged.

- 1.8 During the consultation period, EMB received nearly 3,300 written submissions through mails, e-mails and fax from various stakeholders in the school sector, educational bodies, business and professional organisations, voluntary organisations and members of the public.
- 1.9 The “3+3+4” reform generated a great deal of public interest and discussion and was widely publicized and reported in the media. There were more than 360 editorial and featured articles in major Chinese and English newspapers. A daily column on the Hong Kong Economic Times was run to address the common concerns. Members of the public also expressed their views on the reform through the phone-in radio programmes. There is overwhelming support for the general direction, the vision and the goal of the proposed “3+3+4” academic system. It is acknowledged that reducing one public examination would create more time for productive learning. There is general agreement that the new senior secondary curriculum will enable students to build a broader knowledge base and a more solid foundation for whole-person development and life-long learning.
- 1.10 To help individual schools prepare for the implementation of the new academic structure and senior secondary curriculum, officers from EMB’s Regional Education Offices (REO) visited every aided secondary school to hear the views of principals and teachers, understand their concerns and discuss with them the projected class structures of their schools and the year of implementation.
- 1.11 Throughout the 3-month consultation period, we met about 30,000 stakeholders to share their views and comments on the reform. A summary of major concerns is provided in Appendix 1.

1.12 In parallel with the publication of the Main Document and consultation activities, EMB conducted a questionnaire survey to collect the views of principals and teachers on the NSS structure, plans for offering proposed NSS subjects, the subject curriculum frameworks and the training needs of teachers. A total of 476 questionnaires were sent out and 471 questionnaires (i.e. 98.7%) were returned. A summary of the survey findings is provided in Appendix 2.

Purpose of the Report

1.13 The purpose of this report is to chart the way forward based on the feedback received during the consultation exercise conducted between October 2004 and January 2005. Each chapter sets out the original proposal, major areas of support, concerns and the way forward for each area.

Organisation of the Report

1.14 This chapter sets out the background to the reform and describes the multiple-strategy and interactive approach adopted in the consultation exercise. In Chapter 2, we restate and synthesize the policy contexts, the essential purposes and the principles underpinning the proposed changes.

1.15 Chapters 3 to 5 outline the new senior secondary curriculum framework and related issues, including Liberal Studies in Chapter 4 and Applied Learning in Chapter 5. In Chapter 6, suggestions on stretching the potential of every student and catering for learner differences under the new system are made.

1.16 Chapter 7 covers essential assessment and certification issues including the new credential: The Hong Kong Diploma of Secondary Education (HKDSE), School-based Assessment (SBA), Standards-referenced Assessment (SRA) and the Senior Secondary Student Learning Profile. Chapter 8 provides the most up-to-date information on the university admission criteria and other interface issues.

1.17 Chapters 9 to 12 cover the supporting measures to be provided by EMB in collaboration with schools and the wider education community, including

professional development programmes and learning/teaching materials in Chapters 9 and 10, and class size, teacher-to-class ratios, subsidies and funding in Chapters 11 and 12. Chapter 13 outlines how different stakeholders can contribute to the reform, the critical milestones, the year of implementation of the NSS academic structure, and the means of maintaining communication between the Government and the public.

Chapter 2 The Policy Contexts, Purpose and Guiding Principles – Better Learning for ALL

The Policy Contexts

2.1 The following paragraphs offer a synthesis of the evolving contexts within which the current proposed reform took shape - the macro environment, the experiences gained from previous reforms, the strengths on which Hong Kong can build, and the challenges.

The macro environment

2.2 The new academic structure and associated curriculum and assessment changes are a response to the following characteristics in the macro environment:

- (a) Globalisation, the explosive growth of knowledge, the advent of information technology (IT) and the development of a knowledge-based economy are leading to unprecedented worldwide changes. Hong Kong's cultural, social and economic developments depend on whether the population can rise to these challenges and make the best use of the opportunities ahead.
- (b) To sustain the development of Hong Kong as an international city amidst the economic restructuring and rapid development in Mainland China, Hong Kong citizens need to develop their adaptability, creativity, independent thinking and life-long learning capabilities.
- (c) Hong Kong has become part of China after 1997. It is necessary to enable every student, as a citizen in Hong Kong, to have more in-depth knowledge of modern China and the world.
- (d) A number of educational reform initiatives have been introduced at the basic education level particularly since 2000. The NSS academic structure is a necessary final step to realise in full the benefits of changes

already underway.

- (e) To address the requirements of an increasingly diverse and complex environment, Hong Kong needs to establish a vibrant and flexible education system that will provide an enabling environment for every person to attain all-round development and to achieve life-long learning. Hong Kong's education system needs to provide multiple progression pathways for further studies and career development, which articulate well with international higher education and the manpower requirements of the 21st Century.

Experience from previous reforms

2.3 The reform of the academic structure is built on the following experiences from previous reforms:

- (a) The provision of 9-year compulsory education in 1978 was successful in providing for quantitative expansion of education to accommodate a rise in the school leaving age for all students to 15. To achieve substantial and qualitative change, it requires improvement to the curriculum, learning and teaching, assessment and the professional capacity of schools.
- (b) Since October 2000, the Government has implemented a comprehensive programme of education reform to keep pace with change in the new millennium based on the recommendations of EC in *Learning for Life, Learning through Life – Reform Proposal for the Education System in Hong Kong* published in September 2000.
- (c) Based on a holistic review of the school curriculum, the Curriculum Development Council's (CDC's) 2001 Report on *Learning to Learn - The Way Forward in Curriculum Development* set out the general directions for curriculum development in Hong Kong for the next ten years. In this, it seeks to realise the vision of enabling students to attain all-round development and life-long learning. In 2002, the CDC published the *Basic Education Curriculum Guide - Building on Strengths* to help

principals and teachers to reflect upon their strengths and decide how best to bring about curriculum reform within a flexible and coherent curriculum framework.

- (d) We understand from previous reform experiences that it is necessary to undertake thorough and detailed planning on the pace, coherence of initiatives, professional capacity, funding modes, critical milestones and review. It is also necessary to generate a sense of participation and enthusiasm among stakeholders essential for the success of the reform.
- (e) It is important to harness local strengths as far as possible in order to extend achievements across all stages of education.

Strengths and challenges of Hong Kong

2.4 The following are the strengths identified in and challenges faced by Hong Kong:

Strengths

- (a) The Government is committed to investment in education to ensure smooth transition to a knowledge-based economy.
- (b) Parents and the community attach much importance to the education of our young people.
- (c) By international standards, Hong Kong students achieve well in a number of areas. For example, Hong Kong students have attained well in international assessment schemes such as the Programme for International Student Assessment (PISA) conducted by the Organisation for Economic Co-operation and Development (OECD) and the World Class Arena organised by the Department for Education and Skills in the UK. Indeed, many of our schools have produced a large number of outstanding students who play key roles in society at local and international levels.
- (d) Hong Kong has a diligent teaching force. The professionalism of teachers has been raised through a significant upgrading of qualifications and

participation in reforms over the past few years as reflected in the nature of discourse and a clearer focus on meeting the needs of student learning.

- (e) Recent education and curriculum reforms have laid a solid foundation, with the education system becoming more flexible and diversified, and student learning more enjoyable and effective. In addition, a culture of continuing professional development and of sharing of good practices is gradually being established.

Challenges

- (f) The change to the academic structure and curriculum of senior secondary education and higher education is a colossal task that will require the concerted effort and commitment of the entire community. It also requires careful planning, co-ordination and commitment of resources.
- (g) The community has high expectations of the reform which has wide-ranging and significant implications. Therefore, we need to have an effective and on-going communication with various stakeholders including parents and students to ensure that what is intended is properly communicated, appropriate adjustments are made, and progress is effectively understood.
- (h) The reform is demanding on teachers. We need to encourage sharing among schools to identify effective means to maximise the professional capacity of teachers.

Original Proposal

2.5 The main features of the proposed academic structure are as follows:

- (a) To provide a “3+3” secondary education structure, so that ALL students benefit from 6 years of secondary education.
- (b) To replace the current two high-stake examinations – the Hong Kong Certificate of Education Examination (HKCEE) and the Hong Kong

Advanced Level Examination (HKALE) – by ONE examination to be taken at the end of the senior secondary stage.

- (c) To introduce a new senior secondary curriculum framework which comprises 3 components:

Core subjects:

Students will take 4 core subjects, i.e. Chinese Language, English Language, Mathematics and Liberal Studies.

Elective subjects:

Students will take 2 to 3 elective subjects among a total of 20 senior secondary subjects and/or COS subjects.

Other learning experiences:

Students need to acquire non-academic learning experiences for whole-person development both within and outside school hours. They include moral and civic education, community service, work-related experiences, and aesthetic and physical/sporting activities.

- (d) To introduce a wider range of approaches to assessment and reporting, including the use of moderated SBA, SRA and a student learning profile.
- (e) To introduce a 4-year undergraduate programme.

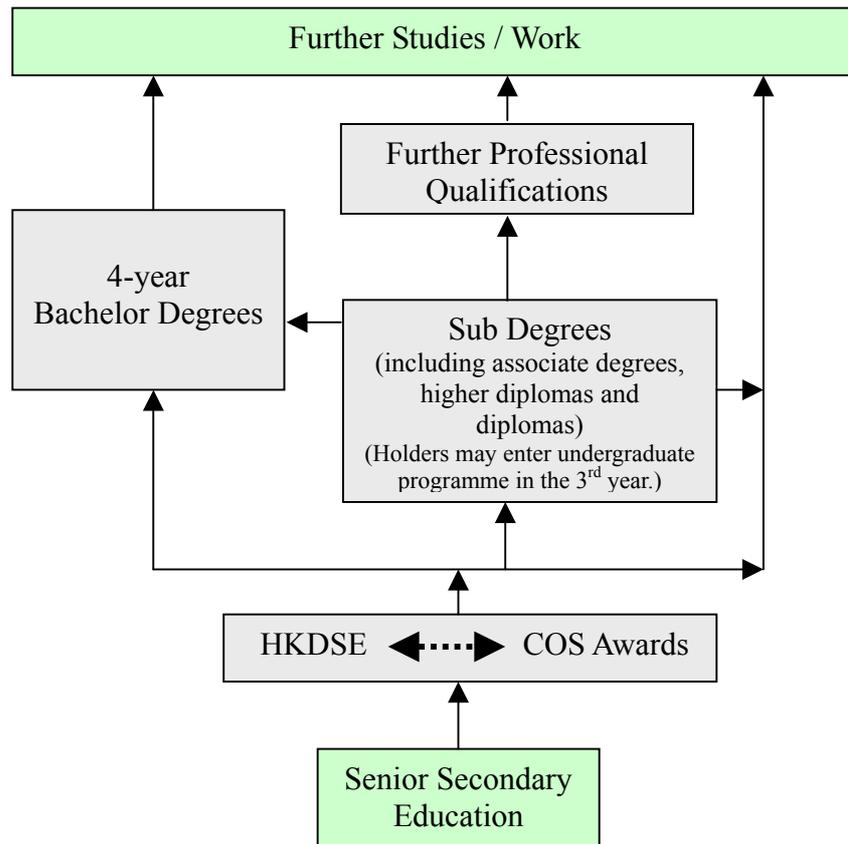
Benefits

2.6 The benefits of the new academic structure will be as follows:

- (a) An extra year of secondary education will equip students better for further studies and in meeting the needs of an ever-changing society.
- (b) The new curriculum is designed to enable all students to achieve enhanced language and mathematical abilities, a broadened knowledge base, increased competence in critical thinking, independent learning and interpersonal skills, and it will provide increased exposure to other learning experiences in moral, civic, physical and aesthetic areas.

- (c) The new curriculum will be more coherent and offer greater diversity and choice to suit the different needs, interests and abilities of students.
- (d) The new system will provide smoother multiple pathways to higher education and the workplace so that every student has an opportunity to succeed in life (see Figure 2.1).

Figure 2.1: Pathways to Life-long Learning



- (e) By replacing the HKCEE and HKALE with a new and more comprehensive assessment system leading to a single diploma, and thus cutting out examination preparation time, there will be extra time for learning, and for effective remedial and enhancement programmes.
- (f) As a result of including an SBA component in the public examination, the assessment of students' abilities will be more comprehensive, particularly with regard to those skills that are not open to assessment in one-off written tests. It will also help to reduce the pressure on one public examination.

- (g) By adopting SRA which gives clear indication of what a student has to know and be able to do to attain a certain performance level, useful and relevant information on student achievement will be provided to various stakeholders including parents, educational institutions and employers.
- (h) The higher education institutions will be in a better position to provide a balanced education to their students, through an integrated 4-year undergraduate programme, that allows for a broader knowledge base to support specialised learning.
- (i) A “3+3+4” academic system will align Hong Kong with a number of other important national systems including Mainland China and the USA, and allow better articulation with them.

Support

- 2.7 There is overwhelming support for the general direction, vision and goals of the proposed “3+3+4” academic structure for senior secondary and higher education.
- 2.8 The majority of respondents agree that the proposed new academic structure and the curriculum and assessment changes should go together.
- 2.9 It is acknowledged that the reduction in the number of public examinations in senior secondary level from two to one will create more time for learning.
- 2.10 The new “3+3+4” structure will provide a wider range of pathways towards further study. 6 years of secondary schooling will articulate better with a number of other major higher education systems around the world.
- 2.11 The public and education sector agree that the “3+3+4” academic structure and the curriculum reforms envisaged will enable students to build a broader knowledge base and a more solid foundation for whole-person development and life-long learning.

Concerns

- 2.12 There are some concerns about the readiness of schools and teachers for the implementation of the reform in 2008, hence the suggestion that the reform of the academic structure should not proceed simultaneously with the reform of the curriculum and assessment.
- 2.13 The reform of the academic structure and senior secondary curriculum may impose a heavy workload on teachers, who have indicated a strong need for the provision of quality professional development opportunities and timely support for the implementation of the new curriculum.

The Way Forward

Guiding principles

- 2.14 We have carefully considered the views collected during the consultation. In charting the way forward, we will be guided by the following principles:
- (a) Decisions and practices are premised on the beliefs that all students have the ability to learn. Students should be provided with a wide range of different learning experiences for whole-person development.
 - (b) Diversified learning, teaching and assessment should be used to suit the different needs, interests and abilities of students.
 - (c) All students should be provided with an enabling environment conducive to their development as self-regulated life-long learners. A learner-centred approach should be used in order to make decisions in the best interests of students.
 - (d) Planning and strategies should be built on existing strengths and implemented at the right pace, taking into account the readiness of teachers, school contexts and the characteristics of the students.

- (e) Due consideration should be given to local contexts and needs. Capacity should be built up through staged experiential approaches and periodic review.
- (f) There is a need to strike a balance between different purposes and practices, competing interests and conflicting views to ensure smooth delivery in the best interests of students.
- (g) The process of change will be carefully monitored making use of critical milestones and evidence to ensure timely and quality support for schools and teachers.

Chapter 3 Curriculum (I): Whole-Person Development and Developing Individual Potentials

This chapter provides information on the broader school curriculum and outlines what will be explored in the 2nd consultation exercise on curriculum and assessment to be conducted in June 2005. It provides information on some of the more controversial issues such as Liberal Studies, the sciences and subjects that may not be widely offered, hence are likely to have impact on the whole student programme. The feedback received during the 1st consultation period regarding the detail of individual subject frameworks will be addressed in the 2nd consultation exercise.

Original Proposal

3.1 The Main Document recommends seven learning goals (para. 3.12) and a student programme (see Table 3.1) for whole-person development to develop the potential of each student. The following student programme (the whole-school curriculum) is recommended for all students. Please refer to Appendix 3 for the proposed subjects within the NSS curriculum.

Table 3.1: Student Programme under NSS

Components of NSS Student Programme		% of Time Allocation
Core Subjects	Chinese Language, English Language, Mathematics and Liberal Studies as core subjects for ALL students	45-55%
Elective Subjects	2 or 3 elective subjects chosen from 20 NSS subjects and a range of COS subjects	20-30%
Other Learning Experiences	Moral and civic education, community service, aesthetic and physical activities, career-related experiences	15-35%

(Note: Schools may adjust the % of time allocation flexibly within each of the core subjects, elective subjects and other learning experiences to cater for the needs of their students and their own school contexts.)

(A) Continuity of Curriculum Reform in Basic Education (P1 – S3) with NSS

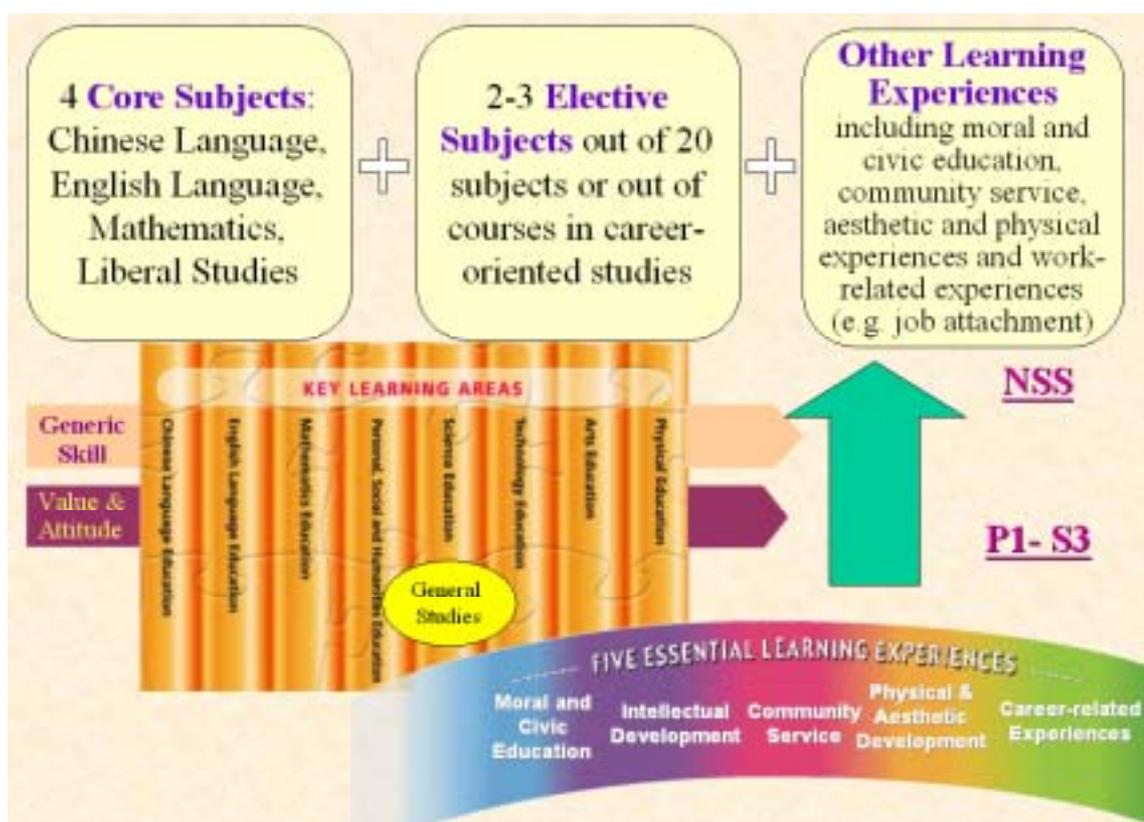
Support

3.2 There is strong support for building on basic education reforms and continuing these through senior secondary education.

Concerns

3.3 The continuity in the curriculum between the Basic Education (P1-S3) and the NSS should be spelt out more clearly.

Figure 3.1: Continuity of Curriculum Reform across Basic Education and New Senior Secondary Education



The Way Forward

3.4 The NSS curriculum is an extension of the curriculum reform in basic education (see Figure 3.1). It promotes student learning to learn capabilities, a broad and

balanced curriculum in eight Key Learning Areas (KLAs), opportunities for cross-curricular learning, and it places an emphasis on positive values of national identity, commitment, responsibility, perseverance and respect for others in moral and civic education. Readers may refer to the *Basic Education Curriculum Guide* and the *Key Learning Areas Curriculum Guide* issued by CDC in 2002, and EMB website <http://www.emb.gov.hk>.

- 3.5 The development of each NSS subject has been based on a consideration of the prior knowledge and learning students are expected to have developed in basic education. This has been reflected in the *Curriculum and Assessment Guides* (C&A Guides) for the NSS curriculum ready for 2nd stage consultation. In brief, all the short-term measures for curriculum reform in basic education introduced since 2001 are intended to prepare students for changes in the NSS curriculum.

(B) Curriculum Framework and Choices in NSS

Support

- 3.6 The general public and the education sector strongly support the NSS learning goals, which, if realised, would not only meet societal and economic goals, but also the personal needs of students to continue life-long learning.
- 3.7 There is strong support for the guiding principles for curriculum design for NSS education that help prepare students to learn how to learn and to become life-long learners for further studies and the work place.
- 3.8 Since the purpose of redesigning the academic structure is to make impact on student learning, there is widespread support for the proposal that the change in structure must take place at the same time as the proposed reform in curriculum and assessment.
- 3.9 There is almost consensus that the student programme, including core subjects, elective subjects and other learning experiences, is balanced and will help broaden the learning of students while developing the potential of individuals.

Concerns

3.10 The fundamental concerns regarding the curriculum framework are related to the tension between breadth and depth, to competing views on what constitutes “essential” learning, and to student choices. Some respondents query whether the programme is broad and diverse enough for all types of students. Common suggestions made are:

- to provide more closely guided choices, such as requiring combination of elective subjects from different KLAs;
- to design basic and advanced components and allow more “subjects” to be taken so that students with different abilities would take different components;
- to allow students to take more elective subjects; and
- to provide different curricula within subjects for students with different abilities/backgrounds.

3.11 The moral development of students needs to be continuously strengthened, and positive values and attitudes need to be nurtured in Hong Kong students.

The Way Forward

Learning goals

3.12 The curriculum framework is designed to enable students to attain the following learning goals for whole-person development and stretch the potential of each student:

- to be biliterate and trilingual with adequate proficiency;
- to 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;

- to be an informed and responsible citizen with a sense of global and national identity;
- to respect pluralism of cultures and views, and be a critical, reflective and independent thinker;
- to acquire IT and other skills as necessary for being a life-long learner;
- to understand their own career/academic aspirations and develop positive attitudes towards work and learning; and
- to lead a healthy life style with active participation in aesthetic and physical activities.

Principles of design

3.13 In order to better achieve the learning goals above and bring about the benefits of the “3+3+4” system, the principles of designing the student programme and subject curricula in the Main Document have been revised below and will be adopted in the more detailed drafts for the 2nd consultation exercise on curriculum and assessment:

Prior knowledge

- (a) All NSS subjects are developed upon the prior knowledge, skills, values and attitudes, and learning experiences expected of students in basic education to ensure vertical curriculum continuity. Schools are expected to ensure that students are adequately prepared at the junior secondary level (S1-S3) for the NSS curriculum.

Balance between breadth and depth

- (b) One aim of the NSS curriculum is to widen the knowledge base of every student while at the same time enabling learning in depth in some subjects to prepare for further study. We have broadened the scope of curricular objectives to include positive values and attitudes, and to promote whole-person development.

Balance between theoretical and applied learning

- (c) All studies valuable for senior secondary education should include theoretical as well as applied learning (see Chapter 5). The balance between theoretical and applied learning will vary according to the nature of the subject and the kind of purposes for which it is being studied. What is important is to ensure that the learning of all subjects is characterized by rigour and relevance and is suited to the needs of the students. Studies with stronger elements of applied learning and linked directly to employment areas will be accommodated in COS whereas core and elective subjects will be more comprehensive in theoretical learning supported by applied learning.

Balance between essential learning and a flexible and diversified curriculum

- (d) While essential learning is provided in the core subjects of Chinese Language, English Language, Mathematics and Liberal Studies, a wide spectrum of elective subjects and COS is provided to cater for divergence in student interests, needs and abilities. For most subjects, essential knowledge and concepts would be provided in the compulsory part, while the elective part would help apply essential knowledge and concepts and cater for the different needs of students.

Learning how to learn and inquiry-based learning

- (e) The current focus in learning and teaching is on developing students' overall capacities for self-directed, life-long learning by embedding independent learning and generic skills into all subjects. Consistent with basic education, communication, critical thinking and creativity remain as priority generic skills in NSS and they form part of all subject curricula. Different subjects, being unique in one way or another, would provide suitable contexts for developing such capability together with learning objectives.

Progression of studies

- (f) The 3-year curriculum should be so designed and time-tabled that it enables students to explore their interests as far as possible in SS1, and then to progress smoothly in their chosen studies (including COS) in SS2 and SS3. Each C&A Guide will provide suggestions as to how learning and teaching can best be carried out, such as sequencing of themes, induction of students to the subject, and flexible time-tabling. SBA and examinations at the end of SS3 will focus on assessing learning developed in SS2 and SS3.

Smoother articulation to multiple progression pathways

- (g) One aim of the NSS education is to provide a curriculum that enables students to pursue academic and vocational/professional education and training with articulation to a wide range of post-secondary and university education or to enter the workplace.

Greater coherence

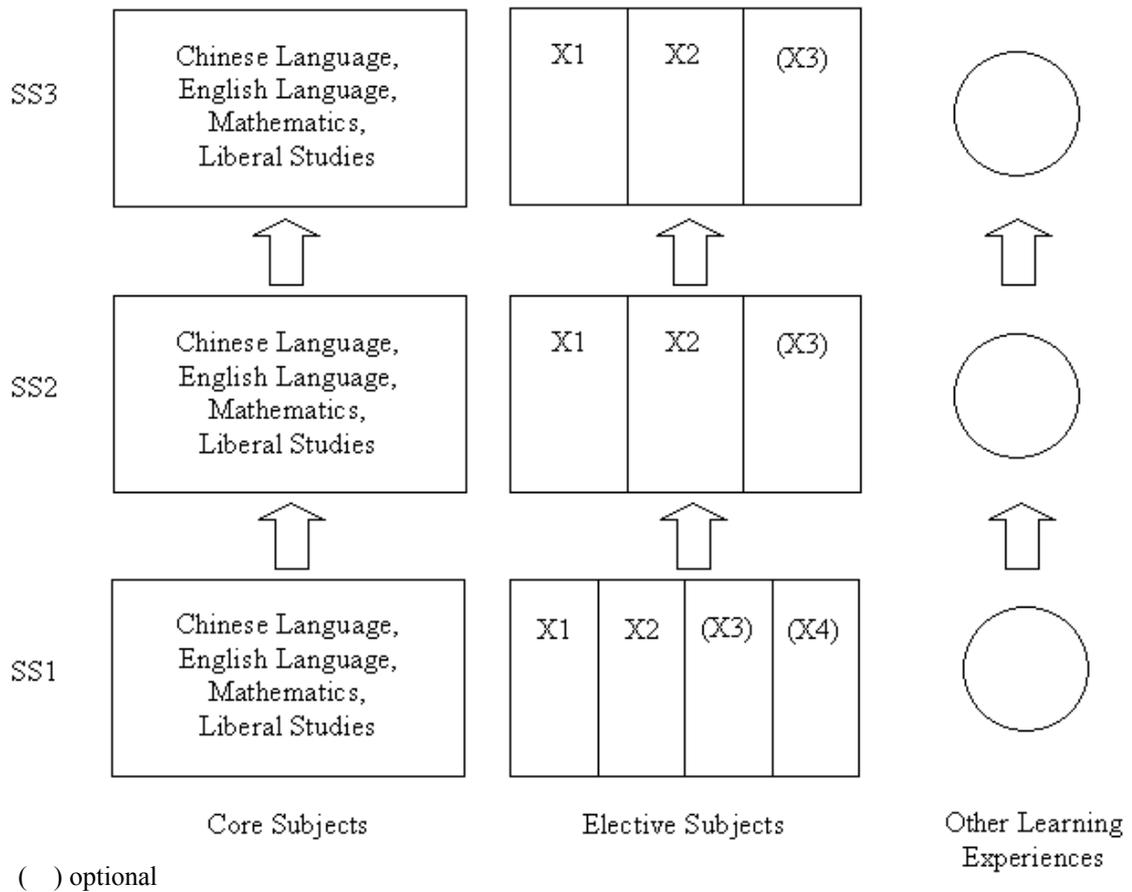
- (h) The aim is to avoid having too many subjects with the possibility for duplication, make connections across subjects including COS, and to introduce other cross-curricular elements, in order to ensure greater coherence in the curriculum as a whole.

In addition to adopting the above design principles for the further development of the NSS curriculum, the following will also be taken into account when preparing for the 2nd consultation.

Student programme – whole-person development and diversification

3.14 The student programme (para. 3.1 and Table 3.1) comprises a broad and balanced curriculum developed on the prior knowledge in the eight KLAs and learning experiences of students gained in basic education. Progression of studies in SS1, SS2 and SS3 is illustrated in Figure 3.2 overleaf:

Figure 3.2: Progression of Studies at Senior Secondary Levels



3.15 The curriculum and assessment framework embodied the following elements for further broadening and diversification of the student programme:

- (a) Breadth in the student programme derives from the collective contribution of core and elective subjects, COS, and other learning experiences involving a range of choices among aesthetic activities, physical activities, career-related experiences, community service, and moral and civic education. This breadth in the curriculum nurtures students in the five essential Chinese virtues: “Moral, Intellect, Physique, Social, Aesthetics” (德、智、體、群、美). Career-related experiences will equip students to cope with the demands of the workplace.
- (b) The aim in SS1 is to enable students to explore their interests. This has meant introducing more subject choices than the number of examination subjects recommended (six to seven). Students can be exposed to a range

of subjects at SS1 before they make decisions for SS2 and SS3. Student performance in subjects or studies that are not reflected in examination subjects would be recorded in the internal assessment of schools and included in the Senior Secondary Student Learning Profile.

- (c) The design of elective parts in subjects like Mathematics will provide students with more choices. This approach is better than having different labels of curricula of the same discipline implying different status in the eyes of students and stakeholders.
- (d) The use of SRA (see Chapter 7) and the design of assessment questions will enable students of high abilities to be stretched while students of lower ability will be able to demonstrate what they could do.
- (e) The subject of Liberal Studies enables students to make connections across knowledge areas and see things from different perspectives and to expand knowledge realm through three cross-curricular areas of studies and enquiry learning.
- (f) The possibility of guided choices would hinge on university decisions on admission requirements.

Interface with post-secondary education

3.16 Chapter 8 provides more information on the interface of the NSS curriculum with post-secondary education. There should be ongoing dialogue between curriculum developers, schools and post-secondary institutions regarding the desirable combinations of subjects and studies to match with the new curriculum design in different post-secondary and university programmes in the new academic structure.

Meeting the aspirations of students

3.17 It is desirable that students are encouraged to choose elective subjects from NSS subjects or COS that match their interests and aspirations to study in post-secondary and university education, or to go to work. We should

recognise that it is a characteristic of young adults that some students of Senior Secondary age have clearer orientations than others. The elective subjects, COS and other learning experiences to be offered by schools should make accommodation for this and attempt not to close off progression pathways to university and the workplace.

Positive values and attitudes

3.18 Positive values and attitudes will be continuously strengthened in core and elective subjects, and other learning experiences as appropriate. The priority values, namely, *national identity, responsibility, commitment, perseverance, and respect for others* promoted in basic education will be further developed. The appraisal of students in key attributes will be discussed in the information guidelines for the Senior Secondary Student Learning Profile.

Students access to elective subjects

3.19 All subjects offered to students are considered worthwhile and valuable to develop the specific potential of students and to prepare them better to meet the needs of the society. Some subjects are not easily offered in school owing to a lack of facilities, resources and space. These include Design and Applied Technology, Music and Home Economics. It is our intention to take measures to support these important subjects. We will explore the use of the Diversity Learning Grant, and special measures such as “centralised” teaching and/or networked classes, to help schools provide for students who have talents in such areas.

(C) Liberal Studies

Support

3.20 The general public and the education sector agree strongly with the rationale and curriculum aims of Liberal Studies.

Concerns

- 3.21 There are diverse views on the implementation strategies and design of Liberal Studies as a core subject.

The Way Forward

- 3.22 Given its importance in the NSS curriculum, Liberal Studies will be discussed separately in Chapter 4.

(D) The Knowledge Base, Chinese Culture, Sciences and Other Proposed Elements of Learning

Support

- 3.23 There is a strong support for providing students with a broad knowledge base in the NSS curriculum. It is also agreed that since Hong Kong is part of China, the learning of Chinese culture and promotion of civic and national citizenship need strengthening.

Concerns

- 3.24 There are concerns that the cultural elements in the Chinese language curriculum appear to be weakened in the NSS curriculum.
- 3.25 The free choice of elective subjects among arts and science subjects may lead to students failing to have sufficient knowledge in physics, chemistry and biology in some university programmes.
- 3.26 There have been suggestions that we should strengthen certain themes in the NSS such as environmental education, legal education and consumer education.

The Way Forward

- 3.27 There will be an overall strengthening of Chinese elements across different components of the student programme. Due emphasis will be placed on Chinese

culture in the core subjects of Chinese Language (as a strand of learning and contexts of language usage and literary appreciation) and Liberal Studies. Students especially interested in Chinese culture may choose elective subjects such as Chinese Literature and Chinese History, or subjects with Chinese elements like Visual Arts, Music, Physical Education or subjects in the Personal, Social and Humanities Education KLA such as Ethics and Religious Studies, Economics, Geography and History.

3.28 The design of the subject of Science will include two approaches to enable students to have a sufficient foundation in science without constraining their choices and to broaden their studies. The two approaches are:

(a) interdisciplinary modular approach – a balance of key ideas from Physics, Chemistry and Biology for students who do not take another science subject

(b) combined approach – comprising 3 parts with contents selected from Physics, Chemistry and Biology for students who take 2 science subjects. This may be taken with three possible options:

- Physics and Chemistry as Science (with Biology as another elective subject)
- Biology and Physics as Science (with Chemistry as another elective subject)
- Biology and Chemistry as Science (with Physics as another elective subject)

In this approach, students can study Physics, Chemistry and Biology in a balanced way at SS1, so that they can make their choice(s) later according to their interests and needs.

(E) Language Standards, Putonghua and Other Languages

Support

3.29 There is support for the biliterate and trilingual language policy.

Concerns

3.30 There is concern that the language standards of Hong Kong students would be lowered as the percentage of time allocated to Chinese Language and English Language seems to be less than before. There is also concern that Putonghua (PTH) is no longer an examination subject.

3.31 As Hong Kong is a cosmopolitan city, more encouragement should be given to the study of languages other than Chinese and English. The needs of ethnic minorities in learning Chinese require attention to ensure that students can integrate more effectively into the Hong Kong community.

The Way Forward

3.32 The language standards will be maintained by continuous improvement of learning and teaching. The use of SRA and the way question papers are set will allow more able students to excel, while motivating less able students to show what they have learnt and to earn recognition for their learning.

3.33 It is our policy to enable every student, as a citizen in Hong Kong, to play a meaningful part in Hong Kong life through the study of English Language and Chinese Language as core subjects in schools. Students whose mother tongue is not Chinese are encouraged to take the NSS Chinese Language or some other overseas Chinese curriculum with examinations administered by HKEAA.

3.34 A PTH test pitched at standards appropriate to S3 will be introduced in 2007. The test will be based on research evidence developed jointly by a local university and the Ministry of Education in the Mainland. Elective modules are available in the subject of Chinese Language for students wishing to study

more advanced PTH. The current option of using PTH as the medium of instruction for Chinese Language, and the provision of a PTH version for the oral and listening component in the HKEAA public assessment will be maintained. Schools with the capacity to use PTH in the learning and teaching of the Chinese Language are encouraged to do so.

- 3.35 As Hong Kong is a cosmopolitan city, the tradition of providing access to study other languages, such as French, German, Hindi, Japanese, Spanish and Urdu is to be upheld. These include the languages of some ethnic groups deemed necessary by the schools. This provision acknowledges that some students cannot learn Chinese effectively and it meets the specific language needs of all students in Hong Kong. HKEAA will explore, in consultation with stakeholders, the possibility of aligning and administering international examinations to meet this need. The proposed Diversity Learning Grant (see Chapter 11) will be used to support the provision of these languages, where necessary.

(F) Catering for Learner Differences and Students with Special Educational Needs

Support

- 3.36 There is support for the proposal that under NSS, all students should study a broad and balanced curriculum.

Concerns

- 3.37 There is concern that the NSS curricula will not be able to cater for a diverse range of student abilities in schools as students not expected to study sixth form in the past would now have to stay in school for one more year.
- 3.38 There is little information provided on how to cater for students with special educational needs in either ordinary or special schools. The issue of equal opportunity for all will have to be addressed.

The Way Forward

- 3.39 For most students, differences in aptitudes and interests can be catered for through the foundation and non-foundation part within compulsory parts of a subject (e.g. mathematics, sciences), the nature of elective parts (for most subjects), flexible learning and teaching strategies, the range of other learning experiences, assessment design and the use of SRA. The C&A Guide for each subject will provide further guidance on this issue. A good test of the success of the NSS curriculum will be its capacity to cater for the needs of all students, regardless of their interests, abilities and Socio-economic Status (SES).
- 3.40 The special educational needs of students including the gifted, and those with profound disabilities and students with other special educational needs, will be discussed separately in Chapter 6.

(G) Development of Career-oriented Studies

Support

- 3.41 There is very strong support, especially from the parent sector, for the provision of COS to enable students with aptitudes and interests in more practical learning to succeed in their studies, develop self-confidence and orientate themselves towards relevant further study and/or a career.

Concerns

- 3.42 The future development of the Career-oriented Curriculum (COC), and of the Yi Jin/Secondary Schools Collaboration Project, both of which are currently being piloted, should be described more fully and made an integral part of the overall senior secondary curriculum in schools.

The Way Forward

3.43 As the COS is a new and significant component in the curriculum, its relationship to other subjects and the principles underlying its design and development are described in Chapter 5.

(H) Time Allocation

Support

3.44 It has been generally accepted that we should allocate 10% of lesson time to each elective subject, and also a minimum of 15% to other learning experiences.

Concerns

3.45 Different views have been expressed on the proportion of time that should be allocated to the learning of core subjects and on how learning time for other learning experiences might be allocated more flexibly.

The Way Forward

3.46 Effective learning time is an important factor in determining student learning outcomes. The time allocation for Liberal Studies is changed to 10% instead of 12.5% as the minimum percentage of total learning time (see Chapter 4) and the time allocation for languages is in the range of 12.5-15%.

3.47 The overall suggested time allocation to different components of the student programme is revised as follows:

Table 3.2: Time Allocation

Component		Suggested range (in %)	Minimum time allocation recommended (in hours)
Core Subjects	Chinese Language	12.5 – 15%	338
	English Language	12.5 – 15%	338
	Mathematics	10 – 15%	270
	Liberal Studies	Min 10%	270
Elective Subjects		20 – 30% (Min10% each subject)	270/subject
Other Learning Experiences	Aesthetic Experience	5% or more	405
	Physical Experience	5% or more	
	Moral and civic education, community service and career-related experiences	5% or more	

3.48 The student programme and the time allocation suggested for each subject are planned on a minimum of 2,700 hours of lesson time over three years (see Appendix 4 for international comparison of school days). Some schools have stated that it will be difficult to include some of the proposed other learning experiences into the conventional lesson-by-lesson timetable due to physical constraints such as lack of an appropriate site. Students' learning opportunities would be satisfied so long as similar number of hours of engaged learning experiences with facilitation of teachers is provided (please refer to Table 3.2). When students take Ethics and Religious Studies, Physical Education, subjects of Arts education as elective subjects and/or COS, the lesson time could be counted towards that for other learning experiences.

3.49 Some schools may wish to offer enhancement or remedial courses, or other languages to suit the different needs of students. These might be offered in addition to all the required learning opportunities in the student programme but they should not overload students.

3.50 The fundamental principle to uphold is that we must provide students with a balanced student programme.

(I) Names of Subjects

Support

3.51 There is general consensus on the names of most of the NSS subjects.

Concerns

3.52 Concerns have been expressed that with the revision of the curriculum framework, the names of some subjects such as Home Economics and Liberal Studies may not reflect the essence of these subjects.

The Way Forward

3.53 The names of subjects reflect the origins and contexts of where the subjects come from, and also the purposes and contents of the subject. A balanced consideration of the contexts and new objectives and contents will be made.

(J) Further Consultation and Guidance

Support

3.54 There is agreement that some schools have made good progress in basic education, and it is generally agreed that the new curricula set out for NSS will dovetail with the reforms in basic education.

Concerns

3.55 As the changes in the NSS curriculum are complex, there should be more guidance provided to schools.

The Way Forward

3.56 Readers are recommended to refer to the 2nd consultation exercise on curriculum and assessment for further information. The 2nd consultation exercise will be conducted in the summer of 2005.

3.57 A *New Senior Secondary Curriculum Guide* playing a similar role to the *Basic Education Curriculum Guide* (CDC, 2002) will be ready in mid-2006 to help schools implement the various facets of NSS. This will include sections on school development planning, the professional development of staff, curriculum planning, changing the paradigm of learning, teaching and assessment and on other learning experiences. The Guide will be supported by exemplary practices.

Chapter 4 Curriculum (II): Liberal Studies as a New Core Subject

The place and design of Liberal Studies in the new senior secondary curriculum has provoked intense public interest. There are intertwining tensions between competing views of knowledge and definition of Liberal Studies, breadth and depth, pedagogical approaches, the ecology of schools, unequal learning opportunities amongst students, examinations and school-based assessment. This chapter provides further direction for the development of Liberal Studies as a core subject for the 2nd consultation exercise on curriculum and assessment, based on the intention to balance the tensions to ensure smoother implementation of the subject to benefit all students.

Original proposal

- 4.1 Liberal Studies is a core subject in the NSS curriculum. It aims to broaden students' knowledge base and enhance their social awareness through the study of a wide range of contemporary issues. It was proposed that the curriculum for Liberal Studies would take up 12.5% of the total lesson time of the overall curriculum.
- 4.2 Liberal Studies will enable students to make explicit connections across knowledge and concepts from different disciplines and enable them to examine issues from multiple perspectives. By adopting an issue-enquiry approach to learning and teaching, the subject will help students to become independent thinkers and life-long learners.
- 4.3 The curriculum comprises three Areas of Study that represent broad areas of concern about the human condition and the contemporary world, namely "Self and Personal Development", "Society and Culture" and "Science, Technology and the Environment". Compulsory units and elective units are proposed for each of the Areas of Study. It was proposed that students would have to study nine compulsory units and six elective units throughout the three years of study.

- 4.4 The curriculum also requires students to conduct an “Independent Enquiry Study” on an issue of their own choice, which will involve concepts, knowledge and perspectives learned during the course of study.
- 4.5 An initial proposal for public assessment was put forward for consultation. This proposed a combination of written examination papers (70%) and a component for SBA (30%).

(A) The Position of Liberal Studies in the NSS Curriculum

Support

- 4.6 There is a strong consensus on the rationale and curriculum aims of Liberal Studies, which include broadening students’ knowledge base, developing students’ multiple perspectives on contemporary issues and learning to learn skills, and helping students to become independent thinkers. Its position as a core subject in the curriculum is critical as a means to address the bias towards discipline-based subjects in the rest of the curriculum. There is particularly strong support from serving Liberal Studies (ASL) teachers who have witnessed the benefits to their students.
- 4.7 Most respondents have agreed that Liberal Studies should be a core subject, after a long period of deliberation and discussion with school heads, parents and universities during the consultation period.

Concerns

- 4.8 Though there is general support for Liberal Studies as a core subject, it has been pointed out that other subjects can also serve the purpose of developing critical and independent thinking among students.
- 4.9 There are very diverse views amongst academics as to the different traditions and interpretation of Liberal Education and General Education.

The Way Forward

- 4.10 Liberal Studies will be a core subject and assessed in the same way as other subjects in the new NSS. The 2nd consultation exercise will focus on the detailed design of the subject based on feedback collected during the 1st consultation exercise.
- 4.11 Liberal Studies plays a unique role in the NSS curriculum by helping students to connect concepts and knowledge across different disciplines, to look at things from more than one single perspective, and to study issues not covered by any single disciplines, such as personal development and Chinese culture. It is more than just about developing thinking skills and positive values and attitudes.
- 4.12 The nature of Liberal Studies is different from that of General Education or Liberal Education in universities. It is a curriculum organisation that suits the curriculum contexts of Hong Kong and achieves the learning goals identified for senior secondary education. It is not necessarily tied to a particular ideology such as “humanism” and “classicism”. It subscribes to a common view that all students could construct and expand knowledge through a variety of learning and teaching activities suitable for the age group engaged in senior secondary education.

(B) Balancing Breadth and Depth

Support

- 4.13 Though there are different perceptions of what is meant by “breadth” in the NSS curriculum, it is generally agreed that the three Areas of Study, namely “Self and Personal Development”, “Society and Culture”, “Science, Technology and the Environment” and the proposed units within them provide breadth of study relevant to the life of students. It is also generally agreed that such areas will give rise to cross-curricular thinking and knowledge construction.

Concerns

4.14 As the subject is new and demanding to most teachers and students, there is some concern that nine core units and six elective units are too much for teachers and students to cope with.

The Way Forward

4.15 The breadth of the subject is maintained by a choice of units amongst the three areas of study. The number of core units in the curriculum design will be reduced from nine to six in order to allow sufficient time for students to develop a deep enough understanding of the issues, develop their thinking skills to deal with the complex issues, and to develop and reflect on values.

4.16 There will be no required electives, as the time devoted to the Independent Enquiry Study within Liberal Studies will cater adequately for the different interests of students.

4.17 A list of areas for Independent Enquiry Study will be produced in order to help teachers to guide students, and to make initial implementation of the subject more manageable.

(C) Curriculum Design, Framework and Time Allocation

Support

4.18 Students who have studied Liberal Studies have stated that the way the curriculum is designed has successfully opened up their mind, given them confidence in communicating with others, and helped prepare them for further studies. Some parents have also seen their children benefit from Liberal Studies.

4.19 Building on the successful impact of the current Liberal Studies (ASL) on students, there has been very strong support for the Independent Enquiry Study as part of the Liberal Studies curriculum framework.

Concerns

- 4.20 Some respondents have claimed that the proposed framework is not robust enough to enable a judgement to be made as to whether the objectives have been achieved. There are too many core units. It has been argued that coverage of the knowledge embedded within them will not be deep enough, and that there will not be sufficient time for discussion and the development of independent thinking skills.
- 4.21 It is argued that since Liberal Studies is a new core subject, the design should be trimmed and it should only take up about 10% of the lesson time of students rather than 12.5% as originally recommended.

The Way Forward

- 4.22 The following structure is proposed for further development of the curriculum:

Compulsory Part: 180 hours (30 hours x 6 units)	Area of Study	Unit
	Self and Personal Development	<ul style="list-style-type: none">• Self and Personal Development
	Society and Culture	<ul style="list-style-type: none">• Hong Kong Today• Modern China• Globalisation
	Science, Technology and the Environment	<ul style="list-style-type: none">• Public Health and Biotechnology• Energy and the Environment
Independent Enquiry Study 90 hours (assessed by SBA)	The study must involve dimensions from both the human world and the physical world as well as perspectives from both personal and social levels. The focus of the study will be chosen among a list of fields such as <ul style="list-style-type: none">• Information and communication technology• Mass media• Religion• Arts• Sports• Education	

4.23 The minimum lesson time for the subject will be 10% of the total lesson time. There is no maximum time allocation set. Schools would have the flexibility to align the learning and teaching of Liberal Studies with other curricular planning such as languages, moral and civic education.

(D) Knowledge Base and Connection with Skills, Attitudes and Values, and Rational Thinking

Support

4.24 There is great appreciation by the public that the subject is aiming at promoting critical thinking and learning to learn skills to prepare students for life-long learning.

4.25 The Independent Enquiry Study is valued as a powerful means of developing students' independent learning capabilities.

Concerns

4.26 Some feel that the subject should help to promote positive values and attitudes, and that the core values, essential to the success of Hong Kong, need to be included.

4.27 There are worries that the knowledge base of the subject is insufficient for supporting discussion of the issues, broadening students' perspectives and developing rational thinking. It is felt that the issue-enquiry approach may not help expand the knowledge base. Some feel that the spirit of "arts" for "sciences", and "sciences" for "arts" has been lost.

The Way Forward

The knowledge base of the subject

4.28 The NSS Liberal Studies is built upon the prior knowledge students have acquired in basic education. The curriculum guide, for the easy reference of

teachers, will identify the prior knowledge expected of students in basic education for the understanding of each unit and the issues as well as their general knowledge base in eight KLAs and moral and civic education. Information will also be provided on how this prior knowledge is connected to the perspectives for the study of each unit.

- 4.29 The Liberal Studies C&A Guide will provide more details on the revised framework, and indicate the scope of each unit and the perspectives involved, but without constraining the boundary of student thinking. They will be explained in the Guide through the nature of issues, suggested questions for enquiry, and explanatory notes. The web-resource platform to be provided by EMB, and sample assessment questions to be provided by HKEAA also help indicate the expected scope and depth.
- 4.30 Based on past experience, it is estimated that content knowledge will constitute about 50-60% of the coverage/enquiry process to support sufficient understanding of the background and nature of the issues. Some may require more due to the nature of units and the limited prior knowledge students may have, e.g. units in “Science, Technology and the Environment” and in “Society and Culture”.
- 4.31 It should be noted that the broadening of the student’s knowledge base in Liberal Studies is to be brought about by continuous knowledge acquisition, construction, building and reflection processes by students in frequent interaction with teachers, other students, people and learning and teaching resources through activities inside and outside classrooms. An introduction to the theory of knowledge will be useful for helping students understand the views of knowledge and how knowledge grows.
- 4.32 Cultural perspectives and scientific literacy will be strengthened in the next stage of design. Other suggested areas of study, such as consumer education, legal studies, equality and Chinese values can be accommodated within appropriate units and guiding questions to enable better connection of knowledge, concepts and values.

Generic skills

4.33 The generic skills involved in studying the issues in Liberal Studies are both tools for building and expanding knowledge as well as products of learning and teaching of the subject. A clear set of skills to be developed would be provided in the C&A Guide.

Value education in Liberal Studies

4.34 Along with the development of multiple perspectives and respect for different values and views held by others, there is a need to uphold core values (e.g. civic responsibility and national identity in the context of Hong Kong). Students will be guided through a variety of learning and teaching strategies to reflect on their own values and those of others and to make their own judgment.

4.35 Positive values and attitudes will be articulated more explicitly in each unit. Priority values in moral and civic education such as commitment, responsibility, national identity and perseverance will be included.

4.36 Values and attitudes associated with the issues will be identified in the curriculum to help students understand the perspectives involved in the issues. These values and attitudes will form part of the learning objectives to be nurtured through appropriate rational thinking and reflections.

(E) The Issue-enquiry Approach

Support

4.37 The issue-enquiry approach is appreciated by respondents as it will encourage students to expand their knowledge and broaden their horizons by pursuing questions relevant to each unit. There are a variety of pedagogical practices compatible with this approach and able to provide meaningful learning experiences to students.

4.38 The issue-enquiry approach will help students develop a better understanding of things happening around them.

Concerns

4.39 Some query whether senior secondary students will have any experience of the issue-enquiry approach.

4.40 There is concern that the use of an issue-enquiry approach will only encourage students to criticize. It is felt that it would not be desirable to develop a culture of “criticism” that is not constructive to society. Instead, more positive values and attitudes should be emphasized.

4.41 Some worry that too high demands and expectations will be placed on students in the approach.

The Way Forward

4.42 The issue-enquiry approach has already been used in different curricula to motivate students to acquire contextual knowledge through the enquiry process, including the successful experiences of the current Liberal Studies (ASL). NSS Liberal Studies will build on existing good practices and it continues to serve the purpose of student learning. More successful exemplars in the learning and teaching of the current Liberal Studies, and other similar approaches should be disseminated and shared among teachers.

4.43 The issue-enquiry approach aims to encourage students to develop self-learning capacity to pursue knowledge and to open up their minds to alternative views through discussion. To avoid over-emphasis on criticism, the C&A Guide and Liberal Studies web-resource platform will provide guidance for teachers to take a developmental and balanced approach to help students understand the background of the issues and analyse the issue and perspectives involved (e.g. differences, conflicts). Students will be helped to understand the consequences of adopting different positions, reflect on their own thinking, make personal judgement, suggest and take positive actions to improve the

well-being of society, rather than being allowed merely “to criticize” in a negative way. The choice of activities would have to match the nature of learning objective and also the learning styles and abilities of students.

4.44 Perennial and contemporary issues will be carefully chosen for the three Areas of Study to suit the developmental stage of students.

4.45 The use of guiding questions to help define the scope and perspectives of the issues mentioned in para. 4.32 will ensure necessary guidance to students for the enquiry process. Positive values and attitudes involved would also be identified for the issues concerned, e.g. conservation, responsibility, national identity. They are conducive to fostering students’ sense of community involvement, responsible citizenship, and taking positive actions to improve the well being of society.

4.46 The issue-enquiry approach supports the following notions about learning:

- Learning is enhanced when teachers identify and work from learners’ current knowledge and beliefs.
- Learning is most effective when it results in well-organised knowledge and deep understanding of concepts and their applicability.
- Learning is enhanced by the ability to monitor one’s own learning.

(F) Assessment and Examination

Support

4.47 There is support for the belief that SBA in Liberal Studies will contribute to a more valid assessment since it can cover a wider range of learning outcomes, and can have positive impact on learning motivation.

4.48 The Independent Enquiry Study based on students’ choice of project themes and guided by teachers is regarded as an essential component in SBA.

Concerns

- 4.49 Some respondents have reservations about the objectivity of public assessment of the subject. Worry about the potential increase in teacher workload is also expressed.
- 4.50 Several respondents have suggested that Liberal Studies becomes an elective and be assessed and reported at fewer levels, for example “pass” and “fail” or graded as “outstanding”, “satisfactory” and “unsatisfactory” at least for the initial years of implementation.
- 4.51 There are widespread concerns among teachers about being held accountable for the assessment of student performance in what, for most, will be a new and unknown subject. This calls for effective provision of professional development and training in this area.

The Way Forward

- 4.52 HKEAA has accumulated rich experience in the assessment of subjects in which issue-enquiry approach is used. Open-ended questions will continue to be used to assess the different thinking skills of students in suitable contexts of learning. To ensure reliability of marking of questions involving open-ended responses, double marking will be adopted for the written examination of Liberal Studies.
- 4.53 From a measurement point of view, HKEAA sees that there is nothing unique about the assessment of Liberal Studies and no special reason why HKEAA should not immediately report using the 5-level system. HKEAA has been successfully assessing in areas involving student opinions and open-ended responses for many years, for example in Chinese and English composition and in History, and it has been assessing Liberal Studies (ASL) for many years. Other examination boards assess subjects similar to Liberal Studies using questions very much like those that are proposed for the Liberal Studies examination, including the Mainland, Australia and UK.

- 4.54 One guiding principle underlying assessment and reporting arrangements for Liberal Studies and indeed for any subject should be that they do not lead to a lower status when compared to other subjects. Therefore, the suggestion that the grading in written examination be in terms of “outstanding”, “satisfactory” or “unsatisfactory” is regarded as problematic. Firstly, this would run counter to the philosophy of SRA, since it would reintroduce the notion of “pass” and “fail”. Secondly, it would mean that Liberal Studies would be assessed differently from all other subjects and this might create difficulties for establishing credibility for Liberal Studies locally and in gaining recognition for the HKDSE internationally. Thirdly, it would disadvantage those who have taken this core subject seriously, and who wanted their results to be treated in the same way as for other subjects. Hence, the 5-level reporting system will apply for Liberal Studies.
- 4.55 The concern expressed regarding assessing student performance in Liberal Studies which for most will be a new and unknown subject is acknowledged. Adequate professional development and training will be provided to teachers (see Chapter 9).
- 4.56 The importance of Independent Enquiry Study will be supported by the ways in which SBA will be developed in other subjects in the NSS. The assessment programme of students in typical student programmes will be monitored and designed in such a way to give space to students while doing the Independent Enquiry Study of Liberal Studies.
- 4.57 The expected learning outcomes of Independent Enquiry Study will be specified. These outcomes can be assessed through a variety of products (e.g. multi-media, graphical, experimental, models, oral and written presentations etc.) produced during and outside class, which will allow students to build on and apply their knowledge and/or skills developed in other subjects.
- 4.58 Local universities have already expressed their initial intention to require the subject of Liberal Studies for university admission and the minimum admission requirement is likely to be set at a threshold level (see Chapter 8).

(G) Student Access to Learning Opportunities

Support

4.59 There is support for the fact that all students, irrespective of whether they are poor or rich, will be entitled to broadening their knowledge base and perspectives in senior secondary education.

Concerns

4.60 There are concerns that students from lower SES families might be discriminated against, because they will not have access to the same level of updated learning resources and outside-classroom learning experience as those from better-off families. There are also worries that these students, and those of lower language ability, will be disadvantaged.

4.61 As the learning and teaching of Liberal Studies involves a lot of classroom discussion, it is important to introduce “small class” teaching in Liberal Studies.

4.62 There is also concern that students may not have opportunities to choose areas they are interested as there are too many core units.

The Way Forward

4.63 In response to the worry that students from low SES families might be deprived of suitable resources for learning Liberal Studies, it can be argued that the Internet resource platform, available inside and outside school, will ensure access. Moreover, the values involved in Liberal Studies are meant to enable students to share the similarities and respect the differences in cultures of those with different SES, races, gender, nationalities, how they have impacted on society and vice versa (societal impact on cultures). The units designed will guide students to develop such respect with analytical and critical thinking, irrespective of their family and gender backgrounds. Introducing different versions of the Liberal Studies curriculum for students from different backgrounds would segregate rather than harmonize students.

- 4.64 The curriculum will include six core units and an Independent Enquiry Study of each student's choice in order to balance the tension between essentials and interests of students.
- 4.65 In response to the demand for small class teaching for the subject, and to allow for flexible groupings at different stages in the learning of the subject, EMB will provide extra resources to support the senior secondary programme, including Liberal Studies (see Chapter 11).

(H) Professional Capacity of Teachers and Schools

Support

- 4.66 There is support for giving flexibility to teachers in the taking up of professional development courses relating to Liberal Studies as many teachers have already had the generic competence in teaching and some teachers are experienced Liberal Studies teachers. Hence, the length of professional development programmes will vary according to the experience of teachers undertaking them.

Concerns

- 4.67 Teachers are worried as to whether they have the necessary skills and knowledge to guide students in learning how to learn. To many of them, the approach involved is felt to be very new. They are also concerned about the workload involved in preparing updated learning and teaching materials for Liberal Studies, and in the individual supervision of the Independent Enquiry Study in a large class.
- 4.68 Some teachers are worried that they will lose their subject identity, and run the risk of not being able to help students get good results in public examination.
- 4.69 There are diverse views on whether the proposed staff development and training hours for Liberal Studies teachers are adequate. Some are worried that the demand for these may exceed the supply.

4.70 There are concerns expressed by the sector that if the subject takes up about 12.5% of the curriculum, this will involve reshuffling of duties within schools which may lead to the discomfort of some teachers. Some are of the view that it may encourage school heads to use it as an excuse to stop offering certain subjects.

The Way Forward

4.71 As teachers and schools are the direct change agents in schools, a variety of measures will be introduced to facilitate the implementation of Liberal Studies.

- (a) Schools will be encouraged to adopt a team approach to the introduction of Liberal Studies and promote collaboration amongst teachers. A Senior Secondary Curriculum Support Grant and other supporting measures will be provided to schools (see Chapter 11) so that Liberal Studies along with the whole senior secondary programme could be implemented smoothly.
- (b) Professional development programmes for Liberal Studies teachers will include the following components: (1) Understanding and interpreting the curriculum; (2) Assessing student learning; (3) Learning and teaching strategies; (4) Enriching knowledge; and (5) Independent Enquiry Study. Adequate provision of places in these training programmes will be provided. Teachers will be able to choose among the courses according to their different needs. More details are provided in Chapter 9.
- (c) In order to build up the ability to teach Liberal Studies early, schools will be encouraged to start implementing Liberal Studies (ASL), Integrated Humanities (S4-5) and Science and Technology (S4-5) as a transitional measure. A School Support Partners Scheme has been launched to facilitate the inter-school support and networking in implementing the three subjects during the transition period. Networks of schools offering these subjects will be formed, through which schools will be assisted to share experiences and provide mutual support to each other.
- (d) As the NSS curriculum is a continuation of curriculum reform in basic

education, measures that help teachers enhance professional capacity in basic education are seen as relevant, especially those for supporting learning how to learn skills, project learning, reading to learn, and cross-curricular learning.

- (e) In view of the range of teaching expertise required by the curriculum, schools and teachers are encouraged to make use of the flexibility allowed by school resources including the Senior Secondary Curriculum Support Grant and the flexible grouping of students and staff deployment for NSS. These may be used to facilitate more effective discussion in classrooms, closer supervision or consultancy for enquiry learning and the provision of more varied life-wide learning opportunities.
- (f) The reduction in the number of units and the provision of resource platform and Senior Secondary Curriculum Support Grant would all help give teachers the space needed for preparing themselves to meet the challenge. Teachers should also be encouraged to be life-long learners to keep abreast of knowledge and education trends.

(I) Development of Learning and Teaching Resources

Support

- 4.72 There is support for student use of a range of different learning and teaching resources (e.g. internet, magazine, newspapers, reference books) to enquire into different issues, rather than having to rely on textbooks which may not be appropriate for the nature of the subject.

Concerns

- 4.73 Given the fact that learning and teaching materials need to be updated continuously, teacher workload is seen as excessive and teachers may not have the time to prepare them.

4.74 There is concern that poorer students may not be able to afford the range of learning and teaching resources recommended for study.

The Way Forward

4.75 The web-based resource platform to be launched in mid-2005 will provide teachers with all the basic information required to understand the NSS Liberal Studies curriculum, updated learning and teaching materials relevant to each unit, exemplary learning and teaching practices, and school case studies.

4.76 The web-based resource platform, together with school and public libraries, will provide suitable and necessary learning and teaching resources for the study of the subject. Purchase of other learning and teaching materials by students is not expected. Schools and teachers will ensure that all students no matter what their SES background can access the information needed.

(J) Reference to International Research and Development

Support

4.77 There is recognition of the useful and successful experiences built upon the current Liberal Studies (ASL) introduced since 1992, Integrated Humanities (S4-5) and Science and Technology (S4-5) implemented since 2003.

Concerns

4.78 Some respondents have expressed concerns about the sufficiency of local experiences and precedence in other countries to support the implementation of Liberal Studies in the new academic system.

The Way Forward

4.79 EMB has made and will continue to make reference to overseas curriculum development experience, research on similar curriculum designs, purpose of learning, pedagogical processes and assessment and their impact on student

learning. Adapted research and developments would be developed to inform practices in relevant aspects of work such as assessment, development of higher order thinking and multi-perspective thinking.

Chapter 5 Curriculum (III): Career-oriented Studies – Applied Learning and an Integral Part of the New Senior Secondary Curriculum

This chapter explains why and how COS is to be made an integral part of the NSS curriculum. All studies will have both theoretical learning and applied learning components but COS will be characterized by having a heavier emphasis of applied learning to develop the potential and interests of those students who learn better through applying and doing in a practical way. COS will provide such students with some early experience of the field of work and perhaps develop an orientation towards a career. COS can match the interests of students of all abilities.

Original Proposal

- 5.1 The Main Document invited comments on the proposal that COS be provided alongside other school subjects and learning experiences in the senior secondary curriculum.
- 5.2 COS is introduced in response to the fact that many students feel constrained by the study of the existing subjects at the senior secondary level, since their individual learning, personal development and needs cannot be fully met by the current learning approaches and their achievements outside these subjects are under recognised. COS aims at offering choices in the curriculum to meet the particular needs, aptitudes and interests of students. It also helps address the issues related to student transition to employment or further studies.
- 5.3 The current piloting of COC and of the Yi Jin/Secondary Schools Collaboration Project (i.e. school-based PYJ) have established a basis from which we can draw experience from and inform our planning and development of COS in the senior secondary curriculum.

5.4 The pilots are designed to:

- develop students' generic and vocational skills as well as values and attitudes;
- be updated regularly to reflect the social, economic and technological development;
- cater for the diverse learning needs and interests of students; and
- provide a means for students to articulate to post-secondary study in local education/training institutions.

5.5 The COC being piloted since 2003/04 school year covers the following nine areas of studies:

- Arts and Media (e.g. Multimedia Game Design)
- Business (e.g. Practical and Computerized Accounting for Small and Medium Enterprise)
- Design (e.g. Fundamental Fashion and Image Design)
- Engineering (e.g. Automotive Technology in Practice)
- Food Production and Management (e.g. Fundamental Western Food Preparation)
- Information Technology (e.g. Computer Networking)
- Leisure, Tourism and Hospitality (e.g. Introduction to Leisure and Tourism Studies)
- Performing Arts (e.g. Introduction to Theatre Art)
- Services (e.g. Beauty Therapy)

5.6 The school-based PYJ being piloted since 2004/05 school year is a whole year programme consisting of seven core modules and three elective modules. The core modules cover languages, numeracy, IT and communication skills through

subjects such as Chinese, English I, English II, Mathematics in Practice, IT Application, PTH and Communication Skills. The elective modules comprise a wide variety of subjects to help students acquire practical skills.

- 5.7 The COS courses will be quality assured by the Hong Kong Council for Academic Accreditation (HKCAA) and the qualification acquired from COS courses will be recognised as part of the Qualifications Framework for articulation to further studies and/or for work.

(A) The Position of Career-oriented Studies in the NSS Curriculum

Support

- 5.8 The school sector generally welcomes the proposal to provide a diversified pathway for senior secondary students. Based on the results of the questionnaire sent to schools, about 55% of schools have indicated their intention to offer COS courses within the NSS curriculum.
- 5.9 Parents and the general public also welcome the proposal to meet the diversified learning needs of students. Some parents have found that their children become more motivated to take part in school life through COC.
- 5.10 Industrial and commercial sectors (e.g. the food industry, the logistics industry, the clothing industry, etc) generally support the proposal, and see it as an opportunity to introduce basic concepts and knowledge about their industries to secondary school students. This was not possible in the past. Such exposure provides students with a clearer picture about possible careers and further study opportunities in the related fields. In the long run, this may help prepare our youngsters to develop skills relevant to work in many different sectors of the economy.

Concerns

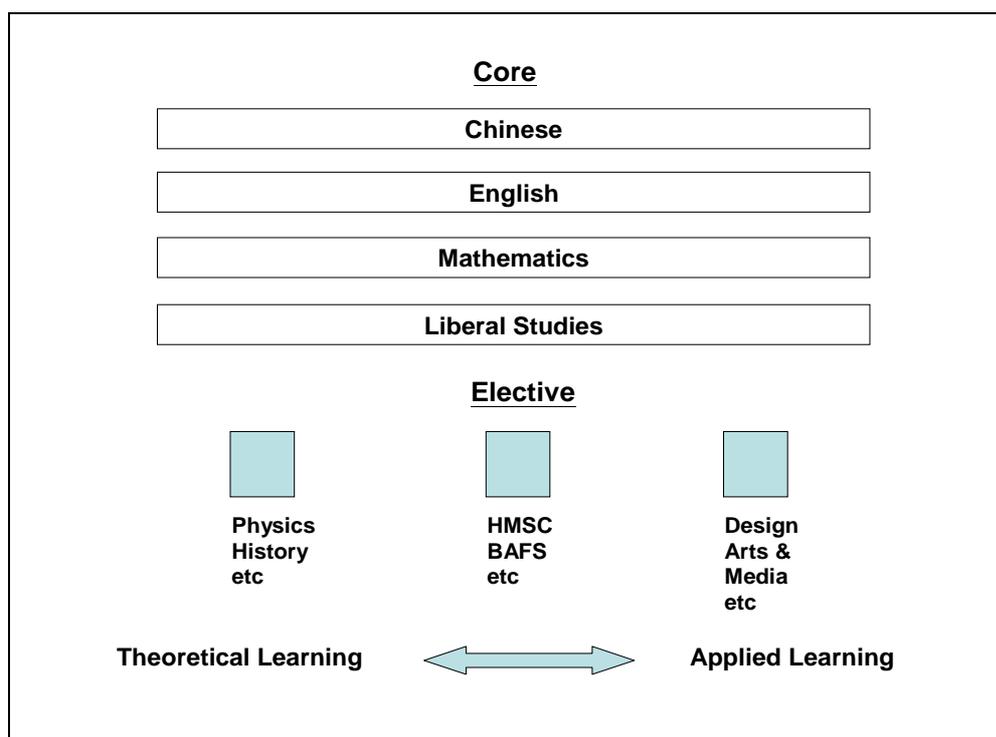
- 5.11 COS is a form of vocational training that is commonly regarded as suitable only for less able students. Such labelling might deter schools from offering COS.

The Way Forward

Curriculum design

- 5.12 The NSS framework developed in Chapter 3 includes but goes well beyond the kinds of learning and assessment arrangements associated with the current academically oriented examination system. The framework comprises three components: core subjects, elective subjects or other qualifications, including COS, and other learning experiences.
- 5.13 The success of the “3+3+4” reform depends greatly on the extent to which this new framework is understood, accepted and implemented.
- 5.14 Most students will typically take 2 to 3 subjects from a total of 20 elective subjects to be examined by HKEAA along with the core studies of Chinese Language, English Language, Mathematics and Liberal Studies. These subjects tend to be of two kinds:
- Discipline-based subjects
 - Field/occupation-based subjects
- 5.15 Subjects such as Physics, Chemistry, Economics, Geography and History are examples of discipline-based subjects that provide entry-points to the stock of human knowledge and give learners foundations for understanding validated and important knowledge.
- 5.16 Other subjects are not constructed around disciplines but around broader fields of knowledge with stronger component of practical knowledge close to certain occupational areas. This applies to subjects such as Business, Accounting and Financial Studies, Design and Applied Technology, Health Management and Social Care, Home Economics, Information and Communication Technology, and Tourism and Hospitality Studies (see Figure 5.1). These subjects will be publicly assessed in the same way as for all other senior secondary subjects, although some over time may have a larger component of school-based assessment to accord with the practical nature of the learning in these subjects.

Figure 5.1: A Continuum of Theoretical and Applied Learning



5.17 All students, regardless of their elective choices should have career-related experiences to help prepare them for the world of work and understand it better.

5.18 Choices in COS are available as electives for students of all abilities. It is vital that due recognition of the importance of the COS subjects is given by schools and that students are encouraged and able to select them. These subjects should have a status deemed comparable to the NSS elective subjects and should provide access to multiple progression pathways to further studies and employment. When the Qualifications Framework is fully developed, the completion of a COS subject should lead to the award of a modular qualification recognised under the Qualification Framework. This will provide students with a basis for further learning and progression in their respective career fields.

Rationale of COS: position along the theoretical and applied learning continuum

5.19 The COS is open to students of all abilities to provide an alternative learning experience that complements the NSS subjects. Students with an early career

inclination may find the COS particularly valuable as an induction to the workplace.

- 5.20 COS is developed in accordance with the principle of curriculum design that there should be a balance of theoretical and applied learning in the school curriculum to enable every student to develop their potential.
- 5.21 The COC currently being piloted in schools lays heavy emphasis on enabling students to develop skills that will help them adapt to or link studies to a certain profession or vocation, and from there, knowledge and concepts (theoretical learning) required for understanding the practice can be acquired (learning by doing). They serve to enhance the motivation of students who are stronger at acquiring and using practical skills. In the present system, the learning potential of these students is constrained by the strong emphasis on theoretical learning in the existing curriculum.
- 5.22 During the course of piloting COC and school-based PYJ, evidence has shown that these have a motivating effect on students' interest and positive attitude in learning other subjects especially those involving generic competencies like languages and mathematics. These in turn help more effective learning in COS. As more than 50% of schools have indicated an interest in COS, it is anticipated that more students will choose subjects in the areas of their strengths and through this become more motivated and confident learners.
- 5.23 COS will enable students to explore their career aspirations that match their interests and strengths in areas such as design, creative industries, entertainment, performing arts, financial planning, health care, food industry and services industry. They will also help prepare them for post-secondary education in related fields.
- 5.24 The relevant professions and vocations will benefit from an early exploration and development of potential talents and career interests on the part of students to contribute to the economy and society.
- 5.25 COS would help develop the potential of students with different inclinations,

talents and interests in learning. Students will benefit from broadening their student programme to accommodate an area of specific interest.

Elements important in the design of COS

5.26 The following elements are seen as important in the design of COS that would develop the potential of students better:

- clearly defined competencies related to the professions and vocations;
- extensive opportunities to combine workplace experiences with learning in a school setting ;
- rich career information and guidance before, during and after COS is taken;
- well-organised pathways that connect school education with work and further study;
- lateral coherence with other elective and core subjects in NSS and the provision of combinations useful for interfacing with post-secondary education; and
- effective institutions and processes in place.

(B) Recognition

Support

5.27 The public welcomes the proposal that COS as elective subjects with comparable status as academic subjects to maximize the learning options of students.

Concerns

5.28 The qualifications acquired by students completing COS courses should be recognised both by the institutions for progression to further studies and by the trade for employment purpose.

5.29 To ensure that COS has a comparable status with other elective subjects in the NSS and to maximize the benefits to students, acceptance by different stakeholders is crucial.

The Way Forward

Accreditation and new qualifications: acceptance by stakeholders in general

5.30 A quality assurance (QA) mechanism will be established in collaboration with the HKCAA to ensure the credibility and recognition of COS qualifications.

5.31 The proposed QA mechanism would be transparent and robust. A pending proposal involves:

- An institutional review to ensure the capacity of the institutions in providing courses at the appropriate level and establishing an internal quality assurance system;
- Programme validation to ensure course quality and lateral coherence within the NSS Curriculum in terms of the programme design; and
- Monitoring of student learning outcomes to ensure the consistency in standards of student learning outcomes across courses and course providers.

5.32 Quality will also be achieved by keeping the number of COS courses and providers within a manageable number. This will assure consistency of standards, allow careful matching of courses to student interest and the needs of economy and society and strengthen resource allocation for effective curriculum development, for establishing appropriate support services, and for the professional development of staff.

Comparability

5.33 The quality assurance process will ensure that the performance outcomes of students in COS can be deemed comparable to other subjects in the NSS.

5.34 For the purposes of facilitating employment and tertiary admission, it is essential that there is broad comparability between COS courses and subjects examined by HKEAA. This can be achieved by

- locating COS at appropriate levels within the Qualifications Framework of Hong Kong; and/or
- formal processes where the COS award levels are mapped to appropriate levels of the HKDSE.

5.35 In view of the different approaches to teaching and assessment in COS, it is suggested that broad comparability with the subjects to be assessed by HKEAA should be established by expert review of the course objectives and expected learning outcomes using student work and performance.

Senior Secondary Student Learning Profile

5.36 The qualifications gained in COS will be recognised in the Senior Secondary Student Learning Profile, a key part of the NSS curriculum and assessment framework. It is the device for bringing together a range of information including HKDSE results, COS Awards and other achievements, in a way that allows employers and tertiary institutions to have a fuller appreciation of each student's achievements and potential.

Informing school personnel and parents about COS

5.37 A strategy will be developed to inform principals, career teachers and other staff members of schools and parents about COS, so that they can make informed decisions about what their schools can offer and how they might counsel students.

Admission to further studies – acceptance by post-secondary institutions

5.38 EMB has initiated action to secure recognition of COS. This will involve developing a set of criteria for securing standards comparable to courses delivered at the senior secondary level in general. The criteria will also have

to be seen as relevant to the needs of particular industries. Students who achieve the required standards in accredited courses will be able to use this recognition for articulation to post-secondary institutions. The criteria for maintaining standards and securing recognition will also help facilitate mutual recognition of COS courses amongst providers, and the selection of the appropriate providers for particular COS courses in the long run. This process is well advanced for the pilot of COC and school-based PYJ.

(C) Provision, Funding and Student Choice

Support

5.39 There is support for the expansion of the provision of COS and to give students more opportunities to study them in schools.

Concerns

5.40 There is some concern as to whether COS courses on offer will be sufficiently diverse. There is also concern as to whether the courses will be kept up to date to accord with the changing needs of the economy, society, and the manpower requirements of different industries.

5.41 The COC being piloted is not subsidized by the Government **at this time**. Students (and their parents) and schools are expecting additional funding so that more students can benefit from COS courses.

The Way Forward

5.42 It is desirable that students who wish to study COS courses should be able to do so. A system will be established to allow a variety of course providers, including a small number of schools, to participate in offering a spectrum of courses meeting the aptitudes, interests and needs of students, and to ensure continuous updating of the courses to meet the changing needs of the economy and society. The following modes of provision will be used to leverage on

existing strengths of institutions and schools:

- External providers may provide courses outside the school premise
- External providers may provide courses in schools
- Teachers as main source of tutors in schools supported by practical or workplaces experiences outside schools
- Regional COS centres may be set up using professional/vocational institutions or schools as bases served by one or more of the above modes.

5.43 A Diversity Learning Grant (see also para.11.46 of Chapter 11) will be provided to enable and support schools to allocate resources to offer a diversified curriculum including COS to meet the interests of students.

5.44 The following guiding principles are proposed for further detailed discussion and trialling:

- (a) Schools should allocate their resources wherever possible to match their curriculum provision to student interests and aptitude.
- (b) No student should be denied the opportunity to study COS due to lack of means.
- (c) Schools may wish to develop into centres offering COS courses to neighbouring schools; or form a school cluster to offer a range of COS courses for students from the member schools; or use other innovative plans in offering COS courses to diversify their senior secondary curriculum and maximise the resources available. Schools who are interested may submit plans to EMB outlining their proposals, including current constraints on resource deployment.

5.45 Experiences in the piloting of COC will inform the future use of the proposed Diversity Learning Grant. The key guiding principle under the new senior secondary programme will be that students should be able to access the learning programme which matches their needs and the variety of student learning

programmes should come under the one funding mechanism for the senior secondary.

(D) Support to Students

Support

5.46 Experience in the piloting of COC has shown that careful guidance and counselling can help raise the self-esteem of students, reduce the risk of students pulling out and sustain their motivation in studying, including other subjects.

Concerns

5.47 As the students' learning experiences in COS are somewhat different from those in conventional curricula, special support to guide students on how best to make choices appropriate to their interests and aptitudes is necessary. Counselling along the way should also be provided.

5.48 Respondents also asked whether the core subjects of Chinese Language, English Language and Mathematics would be geared towards the needs of students with a strong inclination towards studying mainly COS as their elective studies.

5.49 There is some concern as to whether students from non-Chinese speaking ethnic minorities, and those with special educational needs in ordinary schools will also benefit from COS.

The Way Forward

Timing of COS

5.50 In order to give students sufficient time to explore studies that are of practical nature or that may lead to career development, all COS will be offered over two years, starting at SS2 when students are relatively more mature and can make

decisions about the relevance of these courses to their future career orientations. Encouraging wide exposure of students across KLAs and subjects in SS1 will assist students to make good choices in SS2.

Chinese Language, English Language and Mathematics for COS students

5.51 The NSS curriculum frameworks for Chinese Language, English Language and Mathematics include attention to generic competencies required of all students with different needs, abilities and interests. Students with a strong inclination towards COS can benefit from the learning of Chinese Language, English Language and Mathematics in contexts of close relevance to COS or related fields. One suggestion that was made is to develop elective parts that are professional or vocational in nature in the NSS curriculum of Chinese Language, English Language and Mathematics. Further discussion on this matter is required with stakeholders in the second half of 2005.

Guidance and counselling

5.52 The career guidance teachers will have to face new challenges of multiple responsibilities and keeping themselves abreast with the changes in COS, the economy and society at large. For example, teachers need to assist students to identify their learning needs and interests in the selection of new courses, provide guidance to students to manage their learning and facilitate student learning by creating a supportive learning environment (e.g. school-based enterprises scheme, inviting professionals as mentors).

Medium of instruction

5.53 Most COS courses are offered in Chinese as the medium of instruction with English glossaries relevant to specific professions and vocations. Some COS courses, using English as the medium of instruction, will also be offered to meet the needs of ethnic minority students.

COS students and other learning experiences

5.54 As some of the COS courses may match closely to student activities for other learning experiences (community service, aesthetic and physical activities, career-related experiences), schools and students are encouraged to consider how to make best use of opportunities and space of other learning experiences to enrich their experiences in relevant professions and vocations or develop complementary learning programmes.

Students with special educational needs

5.55 Arrangements will be made for students with special educational needs (SEN) in both ordinary and special schools so that they will have the opportunity to pursue COS.

(E) An Adequate and Competent Teaching Force

Support

5.56 Some teachers expressing support for COS also indicated that they would need relevant professional development opportunities so that they could take up the teaching of COS in the future.

Concerns

5.57 Some respondents were worried that external providers might not have the capacity to provide all COS needed by schools.

5.58 Teachers express concern as to whether there will be enough professional development opportunities for instruction in COS, and whether they will be given time-off to take longer courses and undertake attachments to specific trade or industries.

The Way Forward

Transition from Piloting to COS in “3+3+4”

- 5.59 The implementation of COS relies on the competence and confidence of the teaching force in supporting student learning. To this end, we are:
- (a) working together with relevant stakeholders to establish a skill set required for delivering COS courses and exploring effective pedagogical-content practices;
 - (b) setting up programmes with relevant teacher education providers to prepare serving teachers to teach COS competently; and
 - (c) working collaboratively with outside organisations to provide mentorship to students in their learning of COS, and to develop personnel experienced in the profession or vocation to become competent teachers of COS.
- 5.60 EMB is prepared to invest extra resources to re-skill teachers who wish to become involved with COS with extended deeper training.
- 5.61 The place, status and support of COS in the NSS system will be informed by the pilots underway and further consultation with key stakeholders on the implementation details outlined in this chapter.
- 5.62 The successful transition from piloting to COS in the NSS curriculum depends on the establishment of:
- a QA system to ensure the quality and standard of COS courses in terms of their curriculum design, course delivery and student learning outcomes;
 - a system for the screening of courses is to be set up so as to ensure that the selected courses can meet the diverse learning needs of students;
 - a funding model to support access of students to COS and for schools to diversify their senior secondary curriculum; and
 - a skill set for COS instructors.

Chapter 6 Stretching Student Potential and Catering for Learner Differences

This chapter discusses arrangements for stretching the potential of students of great learner differences, including those with special educational needs (SEN) and gifted students. In so doing, EMB is committed to the principle that all students should learn under “one curriculum framework for all”.

Original Proposal

- 6.1 The Main Document states in its first chapter that the goal of education is for ALL students to develop into balanced individuals who can contribute in meaningful ways to society, and who can draw on their own internal resources to continue to learn, apply their strengths and address their weaknesses. The realisation of the goal calls for a more broad-based curriculum with more choices to suit individual aptitudes and interests, and different approaches to learning.
- 6.2 The policy of the Government is to ensure that all students, including children with SEN, should have equal opportunity in education with suitable adaptation to the overall curriculum framework to meet specific needs and alternative arrangements appropriate to the needs and well-being of students.

(A) Special Education

Support

- 6.3 Children with SEN should have equal right to educational opportunities under the concept of “one curriculum framework for all”. The education sector basically supports that current provision for students with SEN should be enhanced in the new system and that there should be an overall review of the specific needs of different student groups.

- 6.4 It is generally accepted that school-based curriculum planning and individualised education programme (IEP) should be the direction for further development for students with SEN who would not participate in the senior secondary curriculum and assessment programme leading to the HKDSE.
- 6.5 Advanced planning for migration from existing special school arrangements towards 6 years of secondary education for all students is necessary.

Concerns

- 6.6 Respondents have stated that EMB should review the curriculum, assessment, teacher development and other support services for special education under the “3+3+4” structure, having regard to the provision for the ordinary schools and the specific needs of the educational services pertaining to the students with SEN.
- 6.7 There is some concern as to whether students with SEN will be provided with pathways for future study and career training, and as to how their achievements will be given due recognition through certification and accreditation of specific studies.
- 6.8 There is concern about how all students could benefit under “3+3+4”, including those who have severe mental disabilities.
- 6.9 There has been some contention about whether the academic structure for mentally handicapped (MH) students whose learning will be supported by an IEP should be on a par with students with SEN in ordinary schools who are able to participate in 3 years of junior and 3 years of senior secondary curriculum.
- 6.10 Special schools including MH schools should receive similar provisions as their counterparts in ordinary schools, such as resource provided for diversification of the curriculum and for Liberal Studies.
- 6.11 Students with specific learning difficulties (SpLD) should be regarded as students with SEN and be provided with the necessary support.

The Way Forward

6 years of secondary education for all students

- 6.12 The Government is committed to provide every student 12 years of schooling in the new academic structure. All students will be able to receive 6 years of secondary education.
- 6.13 “3+3” denotes that all students will be able to receive 6 years of secondary education. It replaces the current “3+2+2” system where only about a third of students proceed to studying S6 and S7. It helps the public understand easily that Hong Kong will now meet the international standard of 6 years of secondary education.
- 6.14 In order to realise the goal of all students reaching their potential, both the provision for students with SEN in terms of length of schooling, and the quality of learning, for example, through a strengthened IEP can be expected as part of the reform of the academic system.
- 6.15 The NSS curriculum and assessment framework will only be successful if it can cater for students with different needs, abilities and interests and develop their potential to the full. It builds upon the curriculum framework in basic education and provides the flexibility to accommodate student needs, including students with SEN who can engage in NSS curriculum and those who may follow IEP development over 6 years of secondary education.
- 6.16 In essence, students with SEN will have exactly the same provision as other students, but with curriculum and assessment to match their capability and interests. Students with SEN who will follow IEP in special schools for the MH will have expanded provision from 4 years of secondary to 6 years of secondary education. The existing Extension of Years of Education (EYE) Programme will continue to pave the way for the implementation of the new system.

Learner characteristics/differences

- 6.17 Generally speaking, students with SEN require special education services to help them learn effectively in the school system. These students may encounter difficulties in learning or social adjustment. Some may experience difficulty in academic learning that require abstract thinking and complicated learning strategies, some may have difficulty in general cognitive development, motor co-ordination, language acquisition or social skill, while others may be weak in memory or other specific aspects of cognitive functioning. Others may be slow in information processing, resulting in severe and persistent difficulties in reading and writing.
- 6.18 It is important that we should focus on what these students can do instead of what they cannot. In the development of new curriculum for students with SEN, EMB aims to provide the least restrictive learning environment to cater for the needs of every student.
- 6.19 Students with SEN, but deemed capable, will follow curriculum and assessment modes as their counterparts in ordinary schools. This can occur in special schools or in integrated settings in ordinary schools. What they require are different learning and teaching strategies, assessment accommodations and targeted support to help them develop their potential.
- 6.20 As for students taking IEP in special schools in the future NSS, the MH students in particular, adaptation to the curriculum contents, teaching methodologies and assessment are necessary to help them strengthen their generic skills and learning in the KLAs at a level which ensures all students can reach their potential.

Curriculum framework and choice for students in special schools (Balance between essentials and choices)

- 6.21 Students with SEN who study in ordinary schools should follow the curriculum and assessment framework and have their progress assessed in the

same way as other students. They may have different choices of subjects to meet their capabilities and interests, but there should not be major deviation from the curriculum framework proposed. This is to ensure equal opportunity for post-school arrangements and to support integration in the community and working life of Hong Kong.

6.22 Different pathways to further studies or training leading to recognisable qualifications will be explored for students who are not inclined to pursue an academic curriculum leading to HKDSE. With the introduction of COS, which offers more choices alongside the HKEAA examined subjects, students with SEN will be able to choose among a range of subjects that develop their interests and abilities under the NSS. Under these circumstances, opportunities for diversified post-secondary courses will be explored with service providers such as the Vocational Training Council (VTC) and other NGOs serving these students.

6.23 It is proposed that for MH students, their current 10-year basic education curriculum structure should be re-structured to ensure a meaningful 12-year curriculum programme with clear learning outcomes and assessment standards. MH students should be able to acquire knowledge, skills and values appropriate to their capacity and interest. The future 6-year secondary curriculum will mainly be built on the existing basic education and EYE Programme. To reap the benefits of the 6-year secondary education, higher expectations leading to more clearly defined learning outcomes for each student at various key stages will be emphasized through curriculum and assessment adaptation and effective teaching methodologies. EMB will also work in collaboration with the Health, Welfare and Food Bureau (HWFB), Social Welfare Department (SWD) and VTC to provide different pathways for these students to cater for their specific needs.

6.24 It is essential that MH students of different capacities should have adapted education programmes and assessment criteria as tailored by teachers and specialist staff. Parents' involvement in the IEP design will also help the

development of a common vision on improved learning between schools and parents. A review of the learning programmes and their delivery modes based on the IEP in special schools is needed. In these special schools, IEP based on individual learning objectives set against the generic skills and KLAs at the basic education level should be a major element in student learning. The needs of MH students with specific arrangements for the learning strategies and curriculum-embedded assessments should be identified.

- 6.25 Though MH students are not prepared for sitting the future HKDSE, the 6-year secondary education should be more functionally oriented and reflect students' learning capabilities with more focus on communication, independent living, vocational training and employment opportunities. Language proficiency and numeracy will also be enriched.
- 6.26 IEP may be conducted in groups or taught as cross-subject learning programmes by teachers and specialist staff. The IEP will inform the student learning profile at different stages of learning.
- 6.27 The implementation of the curriculum and assessment framework in special schools is a developmental process that will involve adaptation and adjustment, as is the practice for ordinary schools, in accommodating the needs of students with SEN.

Strengthening guidance and counselling

- 6.28 The expanded provision and new curriculum and assessment procedures will be new to the special school sector as for other schools. It is important that parent involvement should be stepped up so that they are able to make the best schooling arrangements for their children and match their expectations with the best professional advice available in meeting the needs of each child.

Students with SEN in ordinary schools and special schools

Students with SEN in ordinary schools

- 6.29 EMB is committed to providing students with SEN with equal opportunities in education. Students who are capable of studying in ordinary schools will continue to do so by participating in relevant school places allocation system as appropriate.
- 6.30 Support such as specific learning support programmes and development of learning strategies will be provided so that participation at senior secondary levels is viable for students with SEN, including those with SpLD. EMB and HKEAA will explore appropriate assessment accommodation facilities based on the current arrangements to help students with SEN in the NSS.

Students with SEN in special schools

- 6.31 It is the Government's policy for students with SEN to continue to be integrated into ordinary schools in so far as they can benefit from such education. As such, special schools offering similar curriculum to ordinary schools should participate in the student allocation systems such as Secondary School Places Allocation (SSPA) and Junior Secondary Education Assessment (JSEA) to facilitate placement of special school students to the ordinary schools.
- 6.32 Nonetheless, there are students who will benefit from continuing their studies in special schools. Arrangements for the secondary education for different types of special schools are set out below:

School for the visually impaired

- 6.33 The school for the visually impaired (VI) offers the curriculum for ordinary schools up to junior secondary level. The school has a long history of successful integration of their students into ordinary schools at various class levels. As such, it is proposed that their existing academic structure remains unchanged. Students who are capable of studying in the ordinary schools will be able to participate in the central allocation system or other appropriate school

placement service at various levels.

Schools for the hearing impaired

6.34 Students in schools for the hearing impaired (HI) have severe to profound hearing impairment, which results in delays in language acquisition and development. They may also have serious disability in language reception and expression, especially auditory reception and oral expression. Because of the special educational needs of the students. It is proposed that schools concerned should maintain 10 years of basic education to better prepare the students for proceeding to the 3-year senior secondary education, with appropriate curriculum adaptation.

Schools for the physically disabled

6.35 Students in schools for the physically disabled (PD) have severe or multiple physical disabilities. Their learning is frequently and regularly disrupted by various therapies, medical attention and hospitalisation. It is proposed that schools concerned should maintain 10 years of basic education to better prepare the students for proceeding to the 3-year senior secondary education, with appropriate curriculum adaptation.

Schools for social development

6.36 Students in schools for social development have emotional and behavioural difficulties that are transient in nature. They should be re-integrated into ordinary schools through SSPA and JSEA Systems and other arrangements when deemed suitable for effective learning in ordinary schools. It is proposed that their academic structure be 3 years of junior secondary education and 3 years of senior secondary education. Schools will continue to participate in the central allocation system for student placement.

Schools for the mentally handicapped

6.37 MH students including those attending VI, HI and PD schools have delay in mental development. The schools should adopt an IEP based on the specific

learning needs of each student. It is proposed that their academic structure be 6 years of secondary education, with their staffing and resource allocation aligned with the curriculum in these schools.

- 6.38 Appropriate and worthwhile post-school destinations should be made available for students, rather than keeping young adults unnecessarily in school. The future curriculum should prepare MH students for post-school placement having regard to their ability and the requirements demanded of them by society. Post-school placement is important for MH students and the interface for support service would be explored with other departments and institutions to serve the long-term interest of these students.
- 6.39 The current experiences of the EYE would serve as a base for adapting the curriculum framework further to suit the needs of SEN.

Hospital School

- 6.40 The Hospital School caters for hospitalised children up to junior secondary level in 17 hospital-units and its education service is mainly compensatory and remedial in nature. Under the new academic structure, EMB will explore with the School the possibility of extending its service to senior secondary students who are hospitalised for a prolonged period of time.

Further education and post-school placement

- 6.41 EMB will strengthen the existing arrangements of short-term attachments of students to the post-school institutions.
- 6.42 EMB will continue to collaborate with VTC and SWD for enhancing the training and employment opportunities for students with SEN, and providing more training information to students of special schools.
- 6.43 EMB will also explore with VTC and SWD the interfacing arrangements for these students to receive training and transit to adult life.
- 6.44 The discussion above sets out proposals for a more detailed dialogue with key

stakeholders, in particular the special schools sector in the second half of 2005. Following this further consultation, the way forward will be set out in more detail by the end of 2005.

(B) Gifted Education

Support

6.45 The definition of gifted education in Education Commission Report No.4 (EC, 1990) and current gifted education policy are widely supported.

Concerns

6.46 Gifted students should be provided with opportunities and support as appropriate or else they would be de-motivated and become under-achievers.

6.47 The development of gifted students should be catered for in the NSS. Flexibility should be given for them to sit public examinations earlier.

6.48 The existing schemes for gifted students should continue under “3+3+4” structure.

The Way Forward

6.49 We are confident that the needs of highly able students will be accommodated in the senior secondary system. However, other needs commonly associated with gifted students (i.e. social, emotional and cognitive) require careful attention. All students have multiple intelligences, but their strengths will differ. The current education system and curriculum have not been able to develop the range of intelligences all students may have. Students exceptionally gifted in certain intelligences may need accommodation through other measures additional to normal classrooms so as to match learning to their abilities, aptitudes and learning style.

6.50 For exceptionally gifted students, through conscious planning of learning objectives, contents, learning and teaching strategies, the three core elements of

gifted education namely, higher order thinking skills, creativity and personal-social competence can be incorporated into the NSS curriculum.

6.51 The gifted should be facilitated to stretch their potential further in terms of more appropriate curriculum, learning experiences, learning and teaching methods and teacher expectations. Some examples of a differentiated curriculum are as follows:

- Curriculum compacting
- Independent projects
- Flexible skill grouping
- Tiered assignments
- High level questioning

6.52 In designing a NSS curriculum for the gifted students, the curriculum content, process, product and the overall learning environment would be considered. Different approaches and strategies for providing a differentiated curriculum would be combined in a variety of ways through enrichment, extension and acceleration.

6.53 EMB will continue to work with universities and other tertiary providers to offer programmes for the exceptionally gifted in subjects relevant to tertiary studies and subjects not currently included in the NSS curriculum.

6.54 The NSS provides a greater freedom of choice, e.g. in-depth exploration of topics of interests in Liberal Studies, elective part in subjects so that the gifted students would have more opportunities to excel. Gifted students could also take accelerated programmes provided in collaboration with tertiary providers. The greater breadth and depth of their studies will be recognised in the Senior Secondary Student Learning Profile.

6.55 Through the notional allocation of 15-35% of curriculum time to other learning experiences, the NSS allows more time for students to meet non-academic goals,

to be engaged in structured learning activities that are essential for the whole person development, and to widen their interests. This space is available for schools to stretch the full potential of the gifted. Collaboration between schools and external providers is central to building substantial learning experiences for gifted students.

6.56 Under the NSS, the three-tier implementation mode¹ for gifted education could still be adopted to realise the spirit of “3+3+4” on one hand and promote gifted education on the other. Pedagogy for gifted students in the NSS will be improved through Regional Gifted Education Clusters and teachers’ network.

6.57 The following possibilities are worth exploring for the exceptionally gifted in the NSS:

- Allowing students to complete HKDSE at an earlier age, particularly through grade skipping during the years of basic education or SS1.
- Development of special, credit-bearing programmes and independent research studies, mentorship in collaboration with tertiary institutions and professional bodies.
- Recognition of awards won in international competitions or the status to represent Hong Kong in their area of excellence, the learning outcomes of which could be considered in university selection processes. As for the underachieving gifted, collaborating with other agencies or Institute of Vocational Education to provide applied learning courses as different pathways for life-long learning is necessary.

6.58 The introduction of SRA, SBA and the Senior Secondary Student Learning Profile in the NSS will serve as a means to motivate on-going work for the gifted students and would allow them to set challenging goals beyond their level and think critically and creatively.

¹ The 3-tier implementation mode includes level 1 – school-based whole class programmes for all students with differentiated teaching approach or through appropriate grouping; level 2 – school-based pull-out programmes for selected more able students, and level 3 – off-site support for exceptionally gifted students

6.59 It is important to make good use of community resources to organise activities for gifted students or to invite representatives from the business sector, academics, parents with special skills and interests to serve as mentors or consultants.

(C) Resource Commitment

6.60 EMB has committed specific additional recurrent resources to support the needs of students with SEN and gifted students in the new academic structure. These include:

- Funding to accommodate the new class structures that may arise in special schools so that all students with SEN can have learning opportunities consistent with the proposals outlined in this Chapter.
- Support for students with SEN undertaking senior secondary programmes in ordinary schools, and for programmes for gifted students through the Diversity Learning Grant (see para. 11.46 –11.47 of Chapter 11).

Chapter 7 Assessment and Certification

This chapter focuses on the responses to the proposals on how assessment and certification arrangements will be changed to ensure alignment with structural changes and changes to the curriculum and student programmes. The overall aim of the changes is to ensure that it is possible to assess a wide range of outcomes relevant to the aptitudes, interests and abilities of the full cohort of students expected to take the HKDSE examination.

Original Proposal

- 7.1 The current HKCEE and HKALE will be replaced with one examination leading to the single credential, the HKDSE.
- 7.2 A wider range of approaches to assessment will be used to reflect curricular intentions, including the use of moderated school-based assessments, which would account typically for 20-30% of the total assessment for each subject.
- 7.3 A “standards-referenced” approach to reporting student achievement will be adopted to enable performance to be reported with reference to a framework of five levels for which a set of descriptors and exemplars will be available. Information regarding the relative standing of students will still be available and could include an index for tertiary selection purposes.
- 7.4 Standards will be internationally benchmarked and recognition for the new HKDSE will be obtained internationally so that students can pursue further studies overseas.
- 7.5 Each student will have a “learning profile” to record their learning experiences and achievements throughout the years of senior secondary schooling.
- 7.6 Changes to university admissions procedures will be made to reflect the new system and allow for admission with a broader set of criteria.

7.7 Arrangements will be made to create clear articulation arrangements between the new HKDSE and work or further education and training options.

(A) The Single Credential

Support

7.8 There is general support from parents, teachers, students and the tertiary sector to replace the HKCEE and the HKALE with a single credential and to the introduction of a Senior Secondary Student Learning Profile.

Concerns

7.9 Some individuals have expressed concern that moving from two examinations to one may increase rather than decrease examination pressures on students.

7.10 Some parents, schools and school councils have suggested maintaining the HKCEE and HKALE beyond the introduction of the HKDSE to guarantee more opportunities for repeaters.

The Way Forward

7.11 Moving from two examinations to one will reduce the amount of time preparing for and taking examinations and thus increase the time available for learning.

7.12 Eliminating the HKCEE will reduce barriers to progression within the senior secondary education stage and thus reduce pressure on students.

7.13 The HKDSE will embody high standards and to achieve at the highest levels will require effort and ability. It will be important that students have realistic expectations regarding their results and be aware of opportunities to defer or repeat.

7.14 The HKCEE and the HKALE will be made available to repeaters in 2011 and 2013 respectively. Surveys will be conducted in September following the completion of the last HKCEE and HKALE examinations for first attempters to

ascertain the demand for different subjects and candidates will be notified shortly thereafter which subjects will be made available. However, students in this situation will need to consider carefully the alternative of studying SS2 or SS3 as most NSS subjects will include contents of the HKCEE.

(B) Standards-referenced Reporting

Support

7.15 There is general support from parents, teachers, students and the tertiary sector for the introduction of standards-referenced reporting of results, including the replacements of the system of existing Grades A-F with Levels 1-5.

Concerns

7.16 Given the larger candidature likely to be enrolled in the HKDSE examination and the smaller number of Levels relative to the current number of Grades, there is some concern that five levels will be insufficient for tertiary selection purposes.

7.17 Given that the current HKALE caters for a relatively small elite group of candidates, there is a concern that standards in the HKDSE should be set with reference to the full range of aptitudes and abilities among students.

The Way Forward

7.18 Each year, expert panels will be established for each subject to set the standards and to determine which candidates will be awarded each level. The panels will use well-established methods to make their judgments and to ensure that standards remain constant from year to year.

7.19 Each of the levels will be accompanied by descriptors that make it clear what a typical student at a given level is able to do. In addition, there will be annotated samples of student work and performance on examinations to illustrate the standards at each level.

- 7.20 The assessment system will be so designed that the full range of achievement can be captured and recognised, encompassing the achievements of those students operating at a level equivalent to the current AL standards and those who demonstrate threshold levels of competence in their learning.
- 7.21 In setting standards, efforts will be made to achieve a more balanced distribution of candidates awarded different levels. Under the current system, a student who is awarded a Grade D is likely to be regarded as having not performed well when in fact they have performed among the best candidates enrolled in that subject. However, Key Levels will be benchmarked against existing Grades, particularly where they are linked to international standards.
- 7.22 To facilitate selection decisions and to give appropriate recognition to outstanding students, it is proposed that the performance of candidates with scores that place them in the top 1% and in the next 3% of the candidature in a given subject be separately reported, either through the use of a symbol Level 5** and Level 5* respectively or by means of a descriptor Level 5 with “High Distinction” or Level 5 with “Distinction”.
- 7.23 A key objective of the new system is to allow any student who perseveres and is supported by good teaching, to achieve and receive recognition for minimum specified threshold standard reflecting what they know and can do. The aim is to reduce significantly the proportion of students currently receiving unclassified assessments and no recognition for their learning.

(C) School-based Assessment

Support

- 7.24 The notion of having an SBA component is supported by tertiary institutions and by the public who see it as reducing the risks inherent in a “one-shot” public examination. The schools and teachers support the rationale for SBA, although they have concerns about its implementation.

Concerns

- 7.25 Principals and school councils have suggested that SBA should not be applied to all subjects and the weighting proposed for SBA (20-30%) is too high, at least in the first instance, given uncertainties about the quality of SBA.
- 7.26 There is some concern that SBA will change the teacher-student relationship from one of partnership to one in which the teacher is the assessor.
- 7.27 There are concerns from a wide spectrum of stakeholders that SBA will increase teacher and student workload.
- 7.28 There are concerns from many that students will submit work that is done by someone else (cheating).
- 7.29 There is uncertainty regarding the form that moderation will take and concern that assessments provided by different schools will not be comparable.
- 7.30 There is uncertainty as to what will happen to those private candidates given SBA in all subjects.
- 7.31 There are concerns that teachers do not know how to carry out SBA in a consistent and effective manner.

The Way Forward

- 7.32 SBA has been adopted by almost all major examination bodies over the past 20 years to improve the quality of learning, teaching and assessment. For example, it has been adopted by all UK and Australian examination bodies with 50% being the typical weighting given to SBA. Provinces in Canada have up to 100% SBA and the International Baccalaureate (IB) has a heavy emphasis on SBA supported by teacher moderation arrangements.
- 7.33 There is a long history of SBA in Hong Kong, although it has been confined to a small number of subjects. By 2006, SBA will be implemented in 13 HKALE subjects and 13 HKCEE subjects. As a result, half of the subjects to be examined under the NSS curriculum will already have a component of SBA

by 2006 (refer to Appendix 5).

- 7.34 In the interests of improving both the validity and the reliability of candidates' final assessments, it is considered that the long-term goal should be for SBA to be a part of the assessment of all subjects.
- 7.35 It is acknowledged, however, that some subjects are more ready for SBA than others and teachers need time to get used to SBA. We expect teachers will become more receptive after 2006 when more teachers will have experience in SBA. SBA will be phased in, with any transitional timeline to be recommended by CDC-HKEAA Committees (One Committees) and in consultation with front-line teachers.
- 7.36 In addition, some flexibility in the weighting given to SBA will be considered (for example, extending the range from 15% to 30% for most subjects), on the understanding that weightings may change over time.
- 7.37 A higher weighting of up to 50% will be considered for some practical subjects such as Visual Arts for which a larger component of SBA may increase the validity of the final assessment.
- 7.38 Consideration will be given to endorsing two kinds of SBA, namely Mode A (continuous assessment) and Mode B (specific activities/tasks), and to allowing One Committees to propose the use of either or both modes within a given subject.
- 7.39 In the interests of avoiding excessive workload pressures, One Committees will be asked to build SBA into ongoing learning and teaching activities within the classroom and not design them as "add-on" activities. They will also be asked to place an emphasis on quality rather than quantity. HKEAA will develop guidelines covering this and other aspects of the development of SBA. Profiles of hypothetical students will be described to ensure that the cumulative impact of SBA across subjects is reasonable and appropriate and contributes to the assessment of learning goals expected from student participation in the senior secondary programme.

- 7.40 To avoid cheating, HKEAA will require that all SBA be designed in ways that enable teachers to authenticate student work and that require principals of schools to sign off that the work assessed is the work of the students concerned. This means that significant proportions of SBA will be done in class under direct teacher supervision.
- 7.41 For all subjects with large enrolments, statistical moderation will be used. Non-statistical methods will be considered for subjects with small candidatures and that involve outcomes that are very different from those assessed through the written examination.
- 7.42 Private candidates will continue to be able to access the public examinations. One Committees will be asked to recommend either that private candidates take an alternative assessment or that their total score be calculated using examination results only and annotated accordingly.
- 7.43 Training packages and training sessions will be organised for all teachers. In the early stages of implementing SBA, HKEAA will err on the side of detailed prescription in terms of expected outcomes, the design of tasks and the specification of how work will be marked, rather than leave too much to teacher judgment. This will also reduce the amount of time teachers need to devote to preparing SBA.

(D) Recognition of the HKDSE

Support

- 7.44 Tertiary institutions welcome the assessment reforms and expect to be able to operate with broader selection criteria in future in the interests of promoting a more general education experience in the senior secondary years.
- 7.45 The University of Cambridge International Examinations has advised that “there should be no problems in establishing equivalence of the new qualification with the UK AS-level examinations.”

Concerns

- 7.46 There is a strong desire among parents, teachers and principals that tertiary selection details be announced as soon as possible.
- 7.47 There is widespread concern to ensure that there will be international recognition of the new HKDSE and that this recognition be secured for the first cohort of candidates awarded the new credential rather than granted retrospectively.

The Way Forward

- 7.48 A Working Group, comprising representatives of universities, HKEAA, UGC and EMB was established in October 2004 to facilitate liaison on various interface issues relating to “3+3+4”. Chapter 8 includes discussion on various interface matters.
- 7.49 HKEAA will work closely with the University of Cambridge Local Examinations Syndicate (UCLES) to ensure international recognition by benchmarking Key Levels in the new HKDSE subjects to British General Certificate of Education (GCE) grades. In addition, HKEAA will negotiate direct recognition of both the current examinations and the new HKDSE with overseas universities.
- 7.50 Benchmarking of standards in English will be undertaken with reference to international English as second language qualifications such as International English Language Testing System (IELTS) and other relevant international tests.
- 7.51 Chapter 8 provides more detailed discussion on arrangements for recognition of the HKDSE.

(E) Senior Secondary Student Learning Profile

Support

- 7.52 There is general acceptance of the importance of recognising abilities and achievements other than academic performance in public examinations.
- 7.53 A very high proportion of schools agreed that the achievements, qualifications and other learning experiences of a student should be recognised by means of a Senior Secondary Student Learning Profile.

Concerns

- 7.54 There is concern about the different ways of interpreting the student learning profile. For instance, should the profile be a showcase of student achievements or a record of a student's endeavour, in particular for the low achievers?
- 7.55 There is also concern about whether the student learning profile should include remarks from schools on the general performance of a student such as services engaged, his/her attitude towards learning, and conduct. Some believe that the inclusion of these elements help encourage whole person development while others argue that these elements cannot be assessed and recorded objectively.
- 7.56 Some principals remark that an unbalanced profile would not give a fair reflection of a student's strength and weakness.
- 7.57 Incorporating other learning experiences in a student learning profile may disadvantage the students from low-income families.
- 7.58 There is also concern about how data pertaining to the student learning profile should be stored, processed and authenticated.

The Way Forward

- 7.59 EMB will develop in collaboration with other partners including schools and HKEAA the necessary guidelines and templates for the production of the Senior

Secondary Student Learning Profile which will be both practical for schools and useful for students. Further discussion with stakeholders is necessary on the types and performance levels of attainments achieved outside school which might be included in the student learning profile.

- 7.60 The student learning profile should provide a comprehensive picture of the full range of achievements and abilities of students. Schools should use resources flexibly and efficiently to provide students with sufficient activities for other learning experiences within schools to cater for their diversified needs and interests.
- 7.61 For students with SEN not adopting the curriculum for ordinary schools, their student learning profile will be based largely on their IEP over the last 3 years of secondary education.
- 7.62 Schools should ensure all students, regardless of social background will have the same opportunities to gain access to the other learning experiences in the same school.
- 7.63 Consideration will be given to the development of an electronic version of the Senior Secondary Student Learning Profile to facilitate use by students in presenting their achievements for tertiary institutions and employers.
- 7.64 The *New Senior Secondary Curriculum Guide* to be developed by 2006 will provide necessary advice to fulfil this objective of wider recognition of student achievements.

Chapter 8 Interface between Senior Secondary Education and Higher Education, and Articulation with Local and Overseas Education Systems

This chapter reports on the directions supporting the interface between senior secondary education and post-secondary/university education, and articulation with local and overseas education systems.

Original Proposal

- 8.1 Universities will need to change their admission criteria to support the new curricula, assessment and public examination at the senior secondary school level and in recognition of the move to 4-year undergraduate programmes.
- 8.2 Universities will continue to be encouraged to broaden their admission criteria and to introduce further flexibility to enable entry through different routes at different levels.
- 8.3 Universities will announce requirements for university admission during 2005 and 2006 so that schools can plan for the combinations of subjects which support diverse post-secondary school pathways for students.
- 8.4 The institutions funded by the University Grants Committee (UGC) will have to draw up campus development plans to meet the increase in overall undergraduate enrolment.
- 8.5 Careful planning will be needed in universities to facilitate the entry of S7 and SS3 students undertaking 3-year and 4-year undergraduate degrees respectively in the double cohort year.
- 8.6 Post-secondary institutions will need to review their programmes including those leading to diplomas and higher diplomas to ensure a better interface with the new system.

(A) University Admission

Support

- 8.7 Universities support the idea of broader selection criteria so that students through programmes that have breadth and depth will enter a 4-year university programme that will be integrated and better prepare graduates for professions/careers by having a broader knowledge base and higher-level generic skills.
- 8.8 The use of a Senior Secondary Student Learning Profile is supported as it will provide more information on different aspects of student development to supplement examination results and will better inform universities' admission processes.
- 8.9 Universities indicate understanding of the impact admission requirements can have on the planning of schools and studies of students. They support the announcement, as early as possible, of more specific information about admission requirements for different faculties/departments.
- 8.10 HUCOM has expressed early support to Chinese Language, English Language, Mathematics and Liberal Studies as core subjects for students, and would consider study of each of them as a minimum entrance requirement.

Concerns

- 8.11 There is considerable concern about the university/faculty admission criteria. Schools in particular have urged for early release of the admission criteria.
- 8.12 There is general recognition that university admission criteria may carry negative wash-back effect on student choices, and in particular its impact might marginalise some subjects and inadvertently maintain heavy streaming towards science subjects.
- 8.13 There is concern whether universities should consider including Liberal Studies as one of the subjects for admission.

- 8.14 There is concern about the weighting of the NSS “Science” subject for admission to universities, compared to Physics, Chemistry and Biology.
- 8.15 There is some concern that universities should not set any entrance examination in addition to the HKDSE.

The Way Forward

- 8.16 A Working Group, comprising representatives of universities, HKEAA, UGC and EMB was established in October 2004 to provide a forum for liaison on articulation between the new senior secondary education with higher education and study the interface issues relating to “3+3+4”.
- 8.17 In support of the proposed “3+3+4” reform, UGC and HUCOM issued a joint statement in January 2005 indicating their support for all four core subjects – Chinese Language, English Language, Mathematics and Liberal Studies to be considered as mandatory requirements for university entrance.
- 8.18 The Working Group is considering what level(s) of attainment might be required for the four subjects. This consideration involves careful modelling of what learning outcomes can be expected for the whole student cohort in the new system taking into account current benchmarked standards, particularly for Chinese and English languages, which will anchor the standards-setting process in the new HKDSE, together with the impact the extra demands of studying Mathematics and Liberal Studies may have on students’ overall performance.
- 8.19 Minimum entrance requirements for Chinese and English languages are likely to require a similar standard of performance as currently applies. In the case of Mathematics and Liberal Studies, it is likely that a lower threshold level of performance will be required.
- 8.20 Universities are committed to providing more specific information in mid-2005 on the broad subject combinations required for tertiary admission, and a preliminary indication of the minimum learning standards expected of each of the four core subjects. It is anticipated by mid-2006, they will provide details

of specific admission requirements at the faculty and programme level.

- 8.21 The Working Group is exploring with HKEAA the information that can be made available in the new assessment system to assist admission and selection processes. The working principle is that no less information, and more if possible, than currently provided should be made available.
- 8.22 There are three levels of requirements to support the entry of students to post-secondary institutions:
- (a) minimum (or general) university admission requirements for students to enter university including core subjects, additional subjects if required and respective standards as needed;
 - (b) programme admission requirements which are pre-requisites over and above the general university admission requirements laid down by individual faculties/programmes, including number of subjects, specific (e.g. Chemistry) or from a group (e.g. one or two science subjects); and
 - (c) selection criteria which are based on relative performance of applicants and other information used in the actual selection process.
- 8.23 All the three, in particular the first two, will have significant wash-back effect on schools and student choices. This has been recognised by the universities.
- 8.24 The importance of early release of specific university/faculty admission criteria for school planning in the next few years is recognised. While the curriculum and assessment of the new senior secondary is still subject to consultation, further development and benchmarking, it is possible for universities/faculties/ departments to announce sufficient information, in advance of the final outcome, for parents, students and schools to plan ahead.

(B) International Benchmarking and Recognition

Support

8.25 There is strong support for obtaining international recognition of the new HKDSE as students may choose to study overseas.

Concerns

8.26 There is concern about the interface between the NSS education and overseas universities and how international recognition of the new HKDSE could be obtained.

8.27 There is concern whether exemption or credits from other qualifications such as IB Diploma would be provided by universities in the new 4-year undergraduate programme.

The Way Forward

International context

8.28 Historically, international recognition has been of great importance to Hong Kong families wishing to enrol their children in overseas universities, especially in UK, but increasingly in a range of other countries, including Australia and USA. In the past, it was difficult because not many people moved overseas and overseas universities were not always set up to take overseas students and had few incentives for admitting overseas students. There were often barriers to overcome to gain entry.

8.29 Globalisation has meant that many more people are choosing to study overseas and so what was an exception has now become a common pattern. There is equally a greater demand by overseas students to take the opportunity to study in Hong Kong.

8.30 In addition, around the world universities are vigorously marketing their services and are actively seeking to attract qualified full fee-paying/scholarship

overseas candidates, to further the status of their institutions and improve the learning environment for local students. As a result, there are far fewer barriers for those who want to study overseas.

The Hong Kong Situation

8.31 HKEAA negotiated detailed arrangements for students who want to study in the UK. These arrangements, which are in place today, work as set out below.

8.32 A sample of examination papers (3 A-level and 3 CE-level) and scripts are sent to one of the examining boards (University of Cambridge International Examinations) each year. They vet the papers and scripts and provide a report on the standards. The HKEAA uses the information to adjust standards in Hong Kong on an annual basis. As a result, HKEAA is able to print on students' certificates that:

HKCEE:

A grade of "C" or above is equivalent to a British GCE O-level pass

HKALE:

A grade of "E" or above is equivalent to a British GCE A-level or AS-level pass.

8.33 This helps students applying for entry into British universities as the standards associated with GCE are well known, even though O-level examinations were discontinued many years ago. However, they still need to meet admission requirements of individual institutions. For students who wish to study in other countries, these equivalences are not as important. These institutions have their own requirements which do not give special recognition of British GCE results.

In the Future

8.34 The Secretary General of HKEAA wrote in November 2003 to UCLES to initiate the process of securing international recognition for the proposed HKDSE and received their reply in April 2004.

- 8.35 UCLES confirmed that there would be no problem in gaining recognition for the new credential using the current approach to establishing equivalence with GCE.
- 8.36 They also suggested that HKEAA should make direct contact with individual institutions about the new credential.
- 8.37 HKEAA proposes to work with UCLES to ensure continuity of equivalence with GCE. Certain levels within the new five Level standards will be benchmarked to a pass in GCE. HKEAA plans to benchmark these standards before the first student cohort takes the HKDSE.
- 8.38 HKEAA also intends to move in the direction successfully taken by other countries/jurisdictions which have six years, rather than seven, of secondary education with a baccalaureate style examination, by negotiating direct recognition of the HKDSE with individual institutions, particularly those that have already taken in Hong Kong students.
- 8.39 HKEAA will start the process by seeking recognition of the current examinations, paving the way for the HKDSE when it is introduced.
- 8.40 Generally speaking, standards of Hong Kong students in subjects such as mathematics and science are world class. Our standards of English understandably need particularly careful benchmarking to ensure acceptance of the HKDSE results. HKEAA has recently carried out a special study of standards in English (Syllabus B) and Use of English with IELTS, so that we are benchmarked internationally. In the future, HKEAA will consider benchmarking standards in English with other international standards and a range of English as a Second Language (ESL) qualifications.

(C) Articulation to Post-secondary Studies and Vocational Training Institutions

Support

8.41 The post-secondary institutions have expressed initial support to the senior secondary student programme.

Concerns

8.42 There is concern that smooth articulation between NSS and post-secondary sub-degree and undergraduate programmes should be ensured.

The Way Forward

8.43 The post-secondary institutions consider that the four core subjects provide the necessary knowledge and skills to study in post-secondary institutions. The articulation to post-secondary studies like Associate Degree programmes would be further discussed.

8.44 Vocational training providers such as the Vocational Training Council, Construction Industry Training Authority and Clothing Industry Training Authority have established internal working groups to study various matters essential to enabling students under the new system who have an interest in pursuing a vocational education. These matters include admission criteria, articulation arrangements and curriculum design.

(D) Moving to 4-year University Programmes

Benefits

8.45 The move to a normative 4-year course will allow our higher education institutions to initiate a host of changes which will benefit both the students and society. These fall into three themes:

(a) Whole-person development

Having one additional year will allow much more time for all-round development of the student. For instance, students can benefit from more and longer student exchange possibilities and enhance their understanding of other cultures and languages. A longer period of stay in hostels may encourage participation in a wider range of campus activities. There will also be more time for outside classroom experience, such as internships and integration at work and education.

(b) A more student-centred learning experience

With an additional year, the institutions will seek to provide a more “personalised”, “student-oriented” learning environment, e.g. more small group tutorial opportunities. There will be a greater focus on learning outcomes. Students will have greater choice and freedom in selecting programmes.

(c) An integrated and broadened curriculum

With four years, it will be possible to design a curriculum to support broad learning across several disciplines. This will give students much wider perspectives and enable them to be more flexible in choosing and combining study programmes as is needed to meet today’s rapidly changing demands. The scope for interdisciplinary studies will be greatly enhanced and potential for having some research experience at undergraduate level will be widened.

Support

8.46 There is overwhelming support for 4-year undergraduate programmes as they will enable students to build a broader knowledge base and a more solid foundation for whole-person development, pursuing life-long learning, and provide community with all-rounded leaders.

Concerns

8.47 There are various concerns raised about specific articulation arrangements in the transition years, especially the double cohort year.

The Way Forward

8.48 The institutions will develop the themes and approaches (para. 8.45) over the coming years. They have stressed that they are also constantly improving and developing the current 3-year programmes. They are fully committed to weaving into the 3-year programmes new elements that stand out as being of particular importance and worth. Moreover, individual institutions will review their degree and sub-degree programmes as well as human resources plans to support the transition to the new system.

8.49 Universities are exploring how to provide a flexible curriculum to accommodate the two cohorts of students who will be pursuing 3-year and 4-year undergraduate degrees concurrently during the transitional period. Different measures such as introduction of foundation courses, a “no year” concept and exempted courses are possible strategies.

8.50 The Government will provide additional non-recurrent resources to support the development and implementation of the new curriculum in the universities. UGC has started to discuss with its funded institutions the enhancement of physical facilities like teaching space, hostels, libraries and canteens to accommodate the additional students. The Government will assist by reserving space for campus expansion and providing funding for the capital works. Some institutions have already started to draw up campus development plans to ensure sufficient teaching space and facilities to meet the increase in overall undergraduate enrolment.

Chapter 9 Supporting Measures (I): Enhancing the Teaching Profession

This Chapter outlines strategies to support teachers and school leaders to be fully prepared for the implementation of the NSS curriculum and assessment framework in schools. They have taken into consideration where and how teachers learn in order to suggest multiple professional development opportunities and learning experiences for teachers and principals.

(A) Professional Development Programmes for Teachers and Principals

Original Proposal

- 9.1 EMB will collaborate with various institutions in providing teachers and principals with professional development programmes on whole-school curriculum management and specific changes in each subject including knowledge enriching and new learning and teaching approaches. Generally speaking, there will be a minimum of 30-35 hours professional development for subject teachers to be supplemented by a range of optional courses for teachers new to subjects like Liberal Studies, and a minimum of 25 hours professional development on curriculum matters related to whole-school curriculum management and the design of curriculum choices to suit different students for principals, vice-principals, academic masters and career/student guidance teachers.
- 9.2 The programmes will be offered within the framework of Continuing Professional Development (CPD). On-site support will be provided when necessary.
- 9.3 Schools are encouraged to formulate staff development plans, organise school-based professional development programmes and nurture work-based

learning culture for their teachers. Teachers should enhance their knowledge and skills as life-long learners so that they can continue their support to student learning.

- 9.4 Teacher education providers will also be encouraged to put due emphasis in their current pre-service and in-service courses on the NSS curriculum.

Support

- 9.5 Reform is seen as necessary if it is in line with the needs of students and the society. As professionals, teachers have recognised the need for developing life-long learning capability to equip themselves with the necessary competencies for the new curriculum, and for coping with stress and tensions which inevitably arise from change.

- 9.6 Leadership from the principal is a critical factor in managing multi-faceted change and maintaining dynamics in communication and collaboration with various parties including parents. In a knowledge-based society, schools will need to become learning organisations. This depends on the principal's leadership to cultivate and sustain professional learning of teachers.

- 9.7 All relevant parties, in particular teachers, principals, vice-principals and career/student guidance teachers, need support to equip them for the reform.

- 9.8 During the 4 years of lead time from the publication of this Report up to the implementation of NSS, comprehensive professional development programmes and opportunities could be provided in phases and according to subject needs and the needs of schools and teachers.

- 9.9 While universities see it as part of their responsibilities to help, many professional and community organisations have also volunteered their expertise to help teachers and schools in one way or another as appropriate to their needs, such as social workers to help Liberal Studies teachers, NGOs to provide learning and teaching materials, medical professions to help teachers of SEN, business organisations to serve as teacher and student mentors in COS.

Concerns

- 9.10 There are concerns about when professional development programmes will start to prepare and support teachers. The adequacy of places for teachers and trainers, in particular for Liberal Studies, and quality of the professional development programmes are seen as important to ensure the success of the reform.
- 9.11 As regards the number of hours of professional development, the general concern is that 35-100 hours is not sufficient for Liberal Studies teachers. On the other hand, many secondary school teachers have already been trained and have possessed the generic competencies required of most subjects, e.g. group discussion, thinking skills, project learning. Hence, flexible choices should be provided for teachers at various stages of their career such as training tailored for beginning and expert teachers.
- 9.12 The feedback from principals/vice-principals about the time for arranging professional development programmes for teachers reveals a concern about releasing teachers during school hours. Suggestions are put forward in seminars and school visits regarding the possibility of providing supply teachers to support the block time day-release mode of intensive professional development, in particular for teachers of Liberal studies.

The Way Forward

- 9.13 The capability of teachers and principals to support the NSS can be enhanced in light of the necessary competencies and knowledge, knowledge of how teachers learn and also the best platforms or opportunities to develop the competencies. The capability developed should collectively make impact at student, classroom, curriculum and school levels to realise the benefits of the new academic structure.
- 9.14 The professional competencies of teachers range from understanding the curricula and how students learn, mastering pedagogical approaches according

to learning needs, the curricula and teachers' strengths, using learning and teaching resources flexibly to cater for learner differences, adopting assessment practices that promote learning and align with the curriculum and public assessment, and counselling and guidance techniques for students.

- 9.15 The competencies required of teachers are not confined to learning and teaching of students only since work and reforms in schools are multifaceted. Teachers and principals need to manage the complexity of changes, both internal and external to the schools, such as deploying human and funding resources, leading a subject/KLA department or a team of teachers in Liberal Studies, communicating and working with parents and community organisations.
- 9.16 In terms of efficiency only, most of the more theoretical professional knowledge and skills (knowledge for practice) can be acquired through courses and self-initiated reading. However, teachers should be given opportunities to put knowledge and theory into practice in order to internalise what has been learnt (knowledge in practice), as well as to adapt their practice to the context of their school and broader education reform settings which would ultimately become their own knowledge (knowledge of practice).
- 9.17 The following sections outline the planning and opportunities of professional development for teachers and principals.

Professional development opportunities for serving teachers and principals

- 9.18 Most teachers and principals implementing the NSS are serving practitioners. The principles underpinning the design of the professional development programmes for them are as follows:
- (a) It is assumed that most teachers and principals have formal professional qualifications and possessed generic competencies in learning and teaching, assessment, counselling of students, and in school management in the case of principals. When known competencies are involved in the programmes, the emphasis will be on applying these to a new context.

- (b) Sufficient provision should be given in specific areas/subjects that are deemed new to all teachers and principals. These include understanding and interpreting various curricula and assessment.
- (c) Programmes will be designed according to the different roles and responsibilities performed in schools, including curriculum leaders/panel chairmen, teachers, librarians, academic masters, vice-principals, principals and supervisors.
- (d) Flexibility will be given to teachers to choose the components that they wish to study. Consultation questionnaires have been sent to schools to collect this information.
- (e) Teachers will be encouraged to develop a professional development profile to reflect on the contents studied and on their capabilities in coping with the needs of NSS.

Programmes for principals and vice-principals

- (f) A programme focused on the management of change at the school level will be provided for school leadership team, including all principals, vice-principals and school supervisors. This tailored course will cover qualities of leading change, understanding the purpose and design of the whole student programme, managing the migration and vertical continuity of school-based curriculum development (both curriculum and processes), flexibility in time-tabling, the provision of guidance to students on choices of studies rather than fitting students into time-table sets, human resource planning including professional preparation of all staff and coherence-making by using the school development plan. The intention is that the course will be flexibly adapted using smaller networks whenever possible as a delivery mode. School leaders will be involved in planning the development of this course to ensure that it meets their practical needs.

Programmes for teachers

- (g) In the light of the responses gathered from the questionnaires to principals/vice-principals, sufficient places for professional development programme, including for example about 1,500 places for each of the two languages and Mathematics and 4,000 places for Liberal Studies, will be provided for teachers. In addition, some professional development programmes on some core elements will be topped up by 20% to ensure adequate support to teachers.
- (h) With a few exceptions like Liberal Studies, there are four components of the programmes:
- Understanding and interpreting the curriculum
 - Assessing student learning
 - Learning and teaching strategies
 - Enriching knowledge

The first two are core provisions for ALL teachers while the other two are optional.

- (i) The programmes for specific subject teachers, in particular for those who might teach Liberal Studies, will generally commence in 2005/06 school year and will be provided progressively up to the year of implementation of NSS, and before SS2 and SS3 of the first cohort where timely advice is required such as for SBA and specific elective parts in particular subjects. The courses will be repeated for new teachers.
- (j) EMB plans to provide not less than 100 hours of training for all Liberal Studies teachers to help them acquire the basic knowledge and skills required for teaching the subject. Of these 100 hours, about 35 hours will be devoted to the mandatory component, while the remainder will be up to the discretion of teachers according to their needs. EMB will meet the level of demand from teachers and schools. Teachers are encouraged to

apply what they have learnt in their own teaching and reflect upon it.

- (k) Section (E) of Chapter 5 has briefly reported how the teacher education programme is going to be developed for prospective COS teachers in schools. EMB is prepared to invest extra resources to broaden the teaching repertoire of teachers to facilitate the teaching of COS. We will make use of the 2nd stage of consultation on curriculum and assessment to collect more detailed data on the professional development needs of teachers when other supportive conditions for implementing “3+3+4” are known to them.
 - (l) There will also be professional development programmes that will address the provision of other learning experiences, a key part of the student programme can be structured and supported in schools. Seminars will also be provided for career masters/mistresses leading into NSS implementation.
 - (m) Different modes and timing of training such as seminars, workshops, courses, e-courses, reflective practice, sharing of experience and visits will be used in the professional development programmes to respond to the needs of professionals.
 - (n) Information on professional development programmes of the NSS will be regularly updated on the web.
- 9.19 Due consideration will be given to the design and recognition given to professional development programmes so that they can function as part of the continuous professional ladder of teachers and principals.
- 9.20 EMB recognises that targeted resources must be provided to schools for flexible deployment to support the professional development of teachers and school leaders (see Chapter 11).

Pre-service teacher education

- 9.21 Communication will be maintained with teacher education providers through regular liaison meetings and administrative mechanisms. Information will be given to all providers regularly to align their efforts in offering programmes in light of changing learning demands of students and society to ensure that quality teachers are available in schools.
- 9.22 EMB will work with teacher education providers to generate useful experiences as input to various teacher education programmes and to promote better understanding of the change processes involved in the new “3+3+4” reforms.
- 9.23 Support to the special education programmes in teacher education will be strengthened to better prepare teachers to cater for learner differences.

(B) Learning Communities

Concerns

- 9.24 There has been concern that the proposed professional development programmes have not fully addressed the contextual needs or the ways in which teachers learn.

The Way Forward

- 9.25 It is recognised that teachers learn from sharing experiences with one another, scaffolding upon different sources of knowledge and reflecting on their own work to build up their teaching repertoire. A lot of the experiences in reforming the NSS have to be generated together amongst the school sector, the Government and teacher education providers, and also be situated in specific regional, school and classroom contexts. Hence, enabling schools to run as a learning community, supporting a collaborative environment in schools and with outside parties, and using reflections to improve practice also enhance the teaching profession.

- 9.26 Teachers should be encouraged to benefit from different organisational settings such as collaborative opportunity in schools, team work to develop Liberal Studies, collaborative lesson preparation, the use of on-line platforms, and teacher/principal networks and inter-school network that suit their needs.
- 9.27 It is useful for schools to develop a staff development plan for the whole school each year and for a span of years, and, in line with it, a development plan for each individual staff member to facilitate the implementation of NSS. The course mentioned in para. 9.18 (f) for school leaders will include advice on this matter.
- 9.28 Schools can make use of the school-based support services provided by different Divisions of EMB, university-school partnership projects supported by the Education Development Fund, and other external facilitating agents deemed as appropriate for the teachers and schools.

(C) Teachers As Key Change Agents

Concerns

- 9.29 The impact of the changes on teacher workload needs to be addressed. The effect on teachers may be compounded by the introduction of a number of education initiatives, for example professional upgrading of language teachers, which require additional training on the part of teachers,
- 9.30 As the work of teachers makes a direct impact on achieving the desirable student learning which is the ultimate goal of NSS, measures are also necessary to address concerns about teacher image and trust.

The Way Forward

- 9.31 In order to give teachers the space to concentrate on preparing for the NSS reform, a training relief grant will be provided for principals to use flexibly to release teachers to take part in professional development programmes, both inside and outside school, by employing supply teachers or other supportive

staff to help out. Using all available resources and more flexible timetabling practices, principals can further support the autonomy of teachers in making individual development plans according to the school development and professional development plans.

- 9.32 Teachers need support in changing beliefs as they adopt changes. This will be achieved by enabling teachers to see the value of reform to students, harnessing and strengthening existing measures to ensure smooth operation, enhancing the understanding of parents and maintaining the co-operation between the principals and parents to give support to teachers and encouragement of a supportive culture in schools by the principal to facilitate professional collaboration among teachers.
- 9.33 We believe that boosting the morale and enhancing the image of teachers are crucial to NSS success, and that these may best be achieved through the use of (a) public relations strategies in recognising success; (b) publicity for good practices to boost motivation among teachers; and (c) raising the awareness of the principal in leading the creation in schools of a culture of learning and mutual support, accompanied by quality opportunities for professional development.

Chapter 10 Supporting Measures (II): Textbooks, Quality Learning and Teaching Resources

This chapter discusses measures to ensure the provision of quality textbooks and learning and teaching resources to support the new curriculum and assessment framework and to facilitate learning and teaching inside and outside classrooms.

Original proposal

10.1 The Main Document highlighted two major points concerning textbooks, and quality learning and teaching resources to support the implementation of the new curriculum.

- (a) Publishers will be encouraged to develop textbooks. In areas where publishers have shown no inclination to write textbooks due to the assumed small demand, EMB will commission writers. The aim is to ensure that for subjects where deemed appropriate quality textbooks will be available before the year of implementation.
- (b) Learning and teaching resources, guidelines and professional development programmes for teachers will be provided for subjects that require frequent updating and contemporary information rather than new textbooks. Universities, professional and community organisations, and commercial producers will be invited to produce the materials and provide relevant professional development programmes.

Support

10.2 Quality textbooks have a positive role to play in helping students understand what they are expected to learn as well as the learning and teaching processes both inside and outside the classroom. Textbooks should provide the core elements of learning in KLAs and subjects recommended by CDC, develop critical and creative thinking and other generic skills in the learning resources

and activities provided, and open up space for students to further acquire and build up knowledge and enable teachers to develop students' diverse learning skills.

- 10.3 Quality textbooks can also assist teachers in their work by consolidating in one place significant materials to support their planned scope and sequence of the learning consistent with the advice of the C&A Guide of each subject, but with the flexibility for teachers to cater for different needs of students.
- 10.4 Teachers should use quality textbooks flexibly in combination with other learning materials (e.g. different media, the natural environment, people, the Internet and other community resources) to enhance effective learning and achieve learning targets.

Concerns

- 10.5 The availability, readiness and quality of textbooks for the new curriculum are crucial ahead of time before implementation.
- 10.6 The price of textbooks should be lowered.
- 10.7 EMB should help to provide copyright-cleared learning materials and set up a "Resources Sharing Centre" to promote Liberal Studies and COS.

The Way Forward

Availability of Quality Textbooks

- 10.8 Although textbooks are only one of many tools to bring about learning, use of quality textbooks can play an important role in effective classroom learning. In order to ensure the supply of quality textbooks, the following measures will be explored:
- (a) A multi-stage textbook review process, instead of the existing one-off textbook review, will facilitate improved alignment with the intentions of the curriculum. It aims to provide writers and publishers with more

frequent feedback and to identify problems or potential problems at a much earlier stage during the whole development process.

- (b) In the case of subjects that have no publisher showing interest due to the assumed low demand in the market, textbook incentive schemes may be introduced to encourage publishers to develop suitable textbooks in some of these subjects, under EMB supervision.
- (c) In parallel with the textbook incentive scheme, EMB will also initiate the development of a wide range of resources. These may include subject areas where a variety of sources of information and multi-media means rather than “texts” are better for learning and teaching. EMB may also consider publishing textbooks in certain subjects, either in parts or the whole, when it is found necessary.

Learning and Teaching Resources

10.9 Learning and Teaching resources should not be confined to textbooks, workbooks and audio-visual teaching aids, but also include worksheets, reference books, web-based learning materials, IT software, the Internet, the media, resources in the natural environment, people and libraries.

10.10 Teachers should make good use of other learning and teaching resources to bring real world problems/issues into the classroom and help students see the relevance of what they are learning and assist them to achieve a wider understanding of related issues.

10.11 In Liberal Studies, a web-based resource platform will be built up to serve teachers through on-going provision of learning and teaching resources covering all units in the subject from June 2005 onwards. There will be a wide variety of learning materials for teachers to use, mostly in the form of copyright-cleared research reports, case stories, individual life histories, and summaries of books/journals.

- 10.12 Schools will be encouraged to use subscribed electronic news more effectively in the learning process across curriculum subjects.
- 10.13 The existing platform of Hong Kong Education City (HKedCity) will be enhanced to promote the sharing of updated information and learning and teaching resources among teachers and with outside agencies, and to nurture a culture of collegial sharing and continuing professional development. For example, a platform will be constructed to enable NGOs and teachers to share information, knowledge and learning resources around Liberal Studies after mid-2005.
- 10.14 As the Internet is also a powerful base for self-learning and for the shared learning of teachers, there will also be improvement in the infrastructure of HKedCity to support the provision of web-based courses for teachers.
- 10.15 It is also worth reiterating that teacher-librarians, as information specialists should work closely with subject teachers to co-ordinate curriculum-related resources and to help develop information literacy among students.

Digital Resources/Internet

- 10.16 Learning is a knowledge construction process involving interaction among students, teachers, resources and the various environments in which learning takes place. Quality digital education resources (and other web-based resources) that require higher degree of interactivity will enable our students to become active learners. It could also have a powerful impact on student motivation and would cater for students with different learning styles.
- 10.17 In NSS, we hope to further integrate IT into the curriculum and the learning and teaching process. Teachers are encouraged to select quality e-educational products produced by EMB and other organisations (including those from overseas) for learning and teaching. Besides reducing teachers' reliance on textbooks, advantages include lowering financial burden on parents and easier updating through electronic means.

- 10.18 The role of existing resource bases such as CDI Curriculum Bank and HKedCity would be further reinforced as agents for sourcing and disseminating digital education resources.
- 10.19 Internet and other web-based materials are increasingly important in student learning. They are particularly effective for student projects and research. However, such web-based resources should not just be used to obtain and summarize information, but should be optimised to encourage students to define problems/issues, and create a product that reflects their learning and critical thinking.
- 10.20 Hong Kong is fortunate to have a powerful platform in HKedCity. Its potential as a professional support to teachers and as a navigator for students to relevant high quality learning resources, through quality assured web-quest engines, will be realised over time.

Chapter 11 Supporting Measures (III): Provision of School Places, Class Size, Class Structures, and Teacher-to-class Ratios and Related Matters

This chapter provides further information on the provision of school places, class size, class structures, teacher-to-class ratios and matters related to the ways in which schools will be resourced to support the new senior secondary learning programmes.

(A) Provision of School Places

Original Proposal

11.1 The number and positioning of secondary schools must be constantly reviewed to take into account the latest population projections and resource implications. At this point in time, the projections indicate that there is no need to build new schools specifically for the implementation of the new “3+3+4” system. Nonetheless, “floating classes” would continue to exist, in particular, in the double cohort year, i.e. the year with the last cohort of S7 students and the first cohort of SS3 students.

Support

11.2 In view of the declining population in the medium term, it is generally accepted that there is no need to build new schools for implementing the new “3+3+4” system. However, some schools have asked for improvement programmes to provide additional classrooms.

Concerns

11.3 Since asymmetrical and symmetrical schools will continue to co-exist when the new system is implemented, there is concern whether processes are available to facilitate the placement of students to other schools if necessary at the end of S3 and for continuation to SS1.

The Way Forward

- 11.4 The Government's aim is for most students to complete their secondary education in their own schools as far as practicable. However, to meet the abilities and interests of the wider student cohort, and the demographic changes across the territory, different class structures will exist in schools. This may include senior secondary schools offering a diversified curriculum which will continue to operate.
- 11.5 The need to provide additional classrooms for some schools will be examined on a case-by-case basis. Our long-term goal is to eliminate "floating classes" in schools.
- 11.6 As some students in asymmetrical schools may need to change schools when promoting to SS1, the existing placement procedure will be revised under the NSS.
- 11.7 The existing JSEA System will be reviewed based on the following principles:
- Not all schools need to participate in the new mechanism, since it is anticipated that the number of schools with an asymmetrical structure will be small.
 - The class structure and the curriculum programme of each school will determine their need to participate.
 - Some schools, including senior secondary schools, are likely to offer student places which match the changing interests and aptitudes of students as they progress from basic education to senior secondary education.
 - For students requiring placement to SS1, most of them are to be accommodated through "discretionary places". As such, sufficient information on courses/programmes offered by schools needs to be made available for parents and students to help them make the best choices according to the needs of students and subject to availability of school

places.

- There will have to be a safety net of central allocation so that all students who wish to do so can proceed to senior secondary education.

11.8 The JSEA System would be reviewed by 2006/07.

(B) Class Size

Original Proposal

11.9 The RASIH Working Group assumed a standard class size of 40 students for planning class structures and consequent staffing arrangements.

Support

11.10 The school sector, taking into account various factors, generally accepted the need to maintain the class size of 40 for senior secondary levels up to the double cohort year.

Concerns

11.11 While accepting the need to maintain the class size of 40, due to practical reasons, some schools hold the view that the benefits of the senior secondary curriculum, with its emphasis on more flexible elective choices, school-based approaches to assessment and student-oriented learning pedagogy, could not be fully realised in large classes. A class size of less than 40 is preferred.

11.12 The school sector proposes small group teaching for subjects in the new curriculum, in particular Liberal Studies which will involve more discussion and project work.

The Way Forward

11.13 The NSS system will be planned on the basis of 40 students per class. This policy setting underpins the resource arrangements necessary to implement the

new academic structure.

11.14 Supporting measures outlined below have focussed on improvements to the teacher to student ratio, leaving schools to make the necessary decisions to plan student learning in the most effective manner, including flexible grouping.

(C) Class Structures

Original Proposal

11.15 The principles of minimum disturbance to existing class structures, consideration of supply and demand of secondary school places on an overall territory-wide basis, a progressive approach to implementation and case-by-case examination of the school's unique context will support class restructuring.

Support

11.16 The principle of minimum disturbance to the existing class structures is agreed.

Concerns

11.17 Class restructuring for some schools may lead to reduction in the number of classes and hence the staff entitlement, resulting in surplus teachers.

11.18 There are concerns about the balance of symmetrical and asymmetrical structures and thus the impact on student enrolments in individual schools.

11.19 The number and distribution of senior secondary schools in the future is a compounding factor in evolving class structures.

11.20 Some senior secondary schools have asked for allocation of S1 students, while some schools seek to turn into senior secondary schools.

The Way Forward

11.21 The principles outlined in para.11.15 will guide the class restructuring process.

EMB has already started and will continue to discuss with individual schools appropriate class structure for them taking into account the demand of school places, their current class structure, the physical constraints, and the need to ensure a broad curriculum is offered to students.

- 11.22 In order to realise the objective of a broad curriculum that provides reasonable choice of subjects to cater for individual interests and aptitude, a school must operate on a viable scale, with a threshold number of students and supporting resources. Schools need to have sufficient senior classes and a range of teacher expertise across the KLAs so that students will have a reasonable choice in their programmes. The most desirable class structures would be in the range of 24 to 30.
- 11.23 The restructuring of classes may result in the transformation of some secondary schools into senior secondary schools and some senior secondary schools into ordinary secondary schools or secondary school cum post-secondary colleges.
- 11.24 The current arrangements for approval of S1 and S4 classes and adjustment of the number of classes at other levels will proceed according to established policy so that resources can be redeployed more effectively for the implementation of “3+3+4”.
- 11.25 As outlined in the original proposal, to ensure continuity of curriculum for students sitting for the HKDSE examination, the number of SS3 classes will be the same as that of SS2 in the preceding year.

(D) Teacher-to-class Ratios and Related Matters

Original Proposal

- 11.26 Two proposals to subsume the top-up provisions in existing staff establishment into a revised teacher-to-class ratio were discussed in detail with the school sector. These are:

Proposal A - Subsuming all the following top-up provisions into the revised teacher-to-class ratios:

- (a) additional teachers for split-class teaching;
- (b) school librarian;
- (c) additional Chinese language teacher(s);
- (d) additional teachers for remedial teaching, counselling and extra-curricular activities; and
- (e) additional non-graduate teachers under Education Commission Report No.5

Proposal B - Subsuming in the revised teacher-to-class ratios all the above top-up provisions except additional teachers provided for split-class teaching.

It was also proposed that schools be allowed a 5-year transitional period to absorb, through natural turnover any surplus teachers which might arise due to implementation of the new teacher-to-class ratio.

Support

11.27 Of the two proposals, there is more support from schools for Proposal A, as it provides higher stability, enhances flexibility and reduces administrative processes for schools.

11.28 During the consultation, different proposals emerged to meet the particular needs which arise from the senior curriculum and assessment framework. These included a Senior Secondary Curriculum Support Grant, a Diversity Learning Grant for widening and diversifying student choices, and one-off resources to help professional preparation for the implementation of the new curriculum. There is widespread support for these ideas.

11.29 The 5-year transitional period for absorption of surplus teachers in individual schools concerned is in general supported as well as flexibility on the year of

commencement of the transitional period.

Concerns

- 11.30 There has been great concern about the proposed change in teacher-to-class ratios and the 4/5 rounding as it might lead to staff redundancy in some schools. There is some concern about the ranking and promotion issues and the existing graduate to non-graduate ratio arising from the proposed teacher-to-class ratios.
- 11.31 There have been concerns raised about whether the total teaching staff available to the schools is sufficient to meet the objectives set out for the senior secondary reform.
- 11.32 Specific concerns have been raised about the implementation details for the proposed Senior Secondary Curriculum Support Grant and Diversity Learning Grant, the relationship of those resources to teaching staff establishment and arrangements for laboratory technicians and workshop teachers.

The Way Forward

- 11.33 Supporting measures are critical to the success of the reform. In providing the supporting measures, consideration will be given to the efficiency and effectiveness of measures, taking into account the overall resource commitment which can be afforded. Taking into account feedback from schools and available resources, the initial proposals have been revised.
- 11.34 Of the two proposals of teacher-to-class ratios, we suggest to adopt Proposal A. This proposal supports schools in adopting more flexible planning processes and subject grouping arrangements which will be necessary to implement the new senior secondary curriculum and to better match the interests and needs of their students.
- 11.35 The revised teacher-to-class ratios in terms of teaching staff establishment for the NSS will be:

Up to the double cohort year

- (a) 1.7 teachers per junior secondary class
- (b) 1.9 teachers per senior secondary class in the new system and S5 of the current system
- (c) 2.3 teachers per S6 and S7 class of the current system

After the double cohort year

- (a) 1.7 teachers per junior secondary class
- (b) 2.0 teachers per senior secondary class

11.36 In each of the above cases, the top-up provision for School-based Remedial Support Programme (SBRSP), Medium of Instruction (MOI), New Schools, School-based Curriculum Tailoring Scheme (SBCTS), Native-speaking English Teachers (NET) Scheme and Integrated Education (IE) will continue to be provided. In the meantime, we will continue to work on the proposal of providing cash grants for the improvement measures for academic low achievers and students with SEN based on a per pupil per annum basis. A combined rate for SBRSP and SBCTS and a separate rate for IE will be worked out for eligible schools at a later stage. Additional resources will be made available under Diversity Learning Grant to strengthen the support for students with SEN at senior secondary levels.

11.37 As for the calculation of staff entitlement, schools may keep the decimal entitlement in the form of a fractional Graduate Master (GM) post but the fractional post will not count towards the calculation of other posts (i.e. promotion posts and graduate and non-graduate ratio). Alternatively, schools may opt for a cash grant and be allowed to encash the post in question under the conditions for the Grant as set out in para.11.39.

11.38 The overall provision of graduate to non-graduate ratio for teachers calculated under the new teacher-to-class ratios will be worked out by taking the average of ratio of graduate to non-graduate posts provided under (a) the existing

teacher-to-class ratio; (b) the top-up provisions under Proposal A in para. 11.26; and (c) the graduate posts under the policy of expansion of graduate posts pursuant to the Policy Address 1993.

- 11.39 To provide further funding flexibility to schools to meet their needs in offering a diversified curriculum, schools will continue to be allowed to freeze up to 10% of the teaching establishment and draw a cash grant instead as under the existing practice of Substitute Teacher Grant. The feasibility of revising the grant is being explored. The grant may be used for employing teachers and supplementary staff, hiring services relating to student learning, subsidizing students' alternative studies, staff training and professional development.
- 11.40 With an overall increase in senior secondary students, the implementation of “3+3+4” will require more teachers as compared with the current structure. We need to employ about 1,200 additional teachers in the double cohort year, compared to the previous year. Careful manpower planning is needed to match current and future staffing needs with the class structure and curriculum plan of each school. The overall increase in demand for teachers arising from the implementation of “3+3+4” is separate from the impact on some schools of a change in class structure.
- 11.41 The roles and duties of laboratory technicians and workshop teachers under the new curriculum and assessment framework will have to be reviewed. There is a need for further discussion to identify the duties which should be undertaken by laboratory technicians and workshop teachers under the NSS system, to recognise the qualifications required for appointment, the qualifications possessed by existing laboratory technicians, workshop teachers and other support staff, and any training or professional development required.
- 11.42 In the case of workshop teachers, any considerations will take into account what might be defined as “workshop” in the future.
- 11.43 Key guiding principles will be to ensure that teaching staff are adequately supported by ancillary staff so that teachers are able to concentrate on core

teaching activities. In addition, consideration is given to feasible roles to be taken up by staff members in the future that require them to broaden their expertise to support student learning.

Additional Support for Schools

Senior Secondary Curriculum Support Grant

11.44 A cash provision equivalent to 0.1 teacher per senior secondary class calculated on the basis of mid-point salary of GM teachers will be allocated on a recurrent basis. In schools where surplus teachers may exist in the transitional years, the grant will be provided in the form of posts to be offset by surplus teachers until natural turnover brings the school's establishment within the normal provision. These offsetting posts will not be counted towards teaching staff establishment (including promotion posts and graduate to non-graduate ratio).

11.45 Schools may use the grant flexibly for recruiting teachers or teaching assistants and buying services and/or learning and teaching materials to facilitate the implementation of the NSS curriculum, including Liberal Studies. The Senior Secondary Curriculum Support Grant will be flexibly administered and can be used in conjunction with Capacity Enhancement Grant and the Operating and Expenditure Block Grant.

Diversity Learning Grant

11.46 An annual provision will be available to encourage schools to offer a diversified curriculum. It will be provided to schools in the form of a cash grant. Since different schools might provide different courses/programmes to cater for the diverse needs of their students, an application process will apply. Schools will need to provide a 3-year plan (reviewed annually). In general, the following courses/programmes will be supported:

- (a) COS
- (b) Other languages such as French, German, Hindi, Japanese, Spanish and Urdu

- (c) Collaboration with other schools to offer networked class in NSS subjects with low enrolment, but are important to individual student programmes, e.g. Visual Arts, Design and Applied Technology, Literature in English
- (d) Support for students with special educational needs studying in ordinary schools
- (e) Programmes for gifted students

Para. 5.44 of Chapter 5 outlines some of the principles which will support trial of the Diversity Learning Grant leading into the implementation of “3+3+4”.

11.47 The revised teacher-to-class ratio, the Senior Secondary Curriculum Support Grant and Diversity Learning Grant will raise the total investment per student in senior secondary education. This investment can only be achieved by the effective use of resources, particularly ensuring viable class structures for all secondary schools.

Teacher Professional Preparation Grant

11.48 EMB understands that significant professional preparation will be undertaken as we move forward to the first year of implementation and therefore has committed additional resources to support teachers and school leaders.

11.49 A one-off cash grant for schools equivalent to an additional GM per annum on average will be provided over 4 years, i.e. from 2005/06 to 2008/09 school years, to help schools create space for teachers and prepare for the implementation of “3+3+4” reform. The grant can be used flexibly by schools to: (a) assign an NSS coordinator to help coordinate the whole school planning, including professional development plan, towards “3+3+4”; (b) create space for professional development of teachers (e.g. employing supply teachers or additional teachers to share the teaching load or create planning time for teachers within the school or provide relief for teachers attending training); and (c) procure services that can increase the professional capacity of teachers. A separate one-off grant would also be provided for schools to procure necessary learning/teaching materials and Furniture/Equipment items required.

Transitional arrangements

- 11.50 The 5-year transitional period to facilitate the absorption of surplus teachers in individual schools through natural turnover can start within two years before or after the implementation of NSS, i.e. beginning between September 2007 and September 2011 and continues for five years. If a school still has surplus teachers after the transitional period, EMB will give consideration on a case-by-case basis. Moreover, the Senior Secondary Curriculum Support Grant could be offset by surplus teachers while natural turnover takes its course.
- 11.51 All schools will be encouraged and supported to develop a Human Resource Plan which can guide school in decision-making and seeking support in implementing the NSS curriculum.
- 11.52 When there is a need to review and amend if necessary the Education Ordinance, Rules and Regulations, and Codes of Aid to facilitate the implementation of “3+3+4”, there would be appropriate consultation with the school sector.
- 11.53 In setting out the supporting measures to facilitate the implementation of the new “3+3+4” system, it should be understood that the context may change over the next few years in response to new needs to allocate resources in ways which can best allow schools to support student learning. Therefore, as now, the arrangements may be subject to review from time to time.

(E) Aided Special Schools

The Way Forward

Class size and class structure

- 11.54 The planned class size of various categories of special schools will be based on current policy settings. The class structures of special schools will follow the proposed academic structure of special schools as outlined in Chapter 6.

11.55 Students who are capable of and suitable for studying in ordinary schools will continue to have this learning opportunity. Special schools offering ordinary school curriculum will participate in SSPA and a revised JSEA System as deemed appropriate. Classes will be offered in special schools for students who are suited to the programmes of these special schools. As such, some special schools will adopt an asymmetrical class structure. The class structure of special schools not offering curriculum for ordinary schools, as far as possible, should ensure that the students have the chance to complete 6 years of secondary education in the same school.

Resource Arrangement

11.56 Resource allocation will focus on the needs of students with SEN and adopt the guiding principles consistent with resource allocation for all schools where appropriate, and with due regard to the overall provision available for education.

11.57 The principles for resource allocation would include arrangements to globalise staffing formula, the rounding practice of school staff provision, revised arrangements of the Substitute Teacher Grant; 5-year transitional period for absorption of surplus teachers, and more funding flexibility through the use of cash grants.

11.58 The appropriate level of resources will be determined after the NSS curriculum for students with SEN, the learning outcomes and assessment standards have been worked out and agreed with stakeholders.

11.59 The proposals set out here and in Chapter 6 will form the basis for detailed discussion with the sector in the second half of 2005, with a view to finalising the way forward for aided special schools by the end of 2005.

Chapter 12: Supporting Measures (IV): Funding

This chapter outlines how the Government proposes to finance the new academic structure. The Government invests heavily in education and will continue to do so to meet the needs and challenges of a knowledge-based society. The new academic structure will incur very substantial resources and bring sustained benefits to Hong Kong, but only with shared commitment by the whole community.

Original proposal

- 12.1 The Government originally estimated that about \$6.7 billion is needed to meet capital, developmental and transitional costs of the new academic structure over ten years, and that the UGC-funded institutions would require an annual recurrent cost of about \$1.8 billion to run an additional year of undergraduate programmes to sustain the new academic structure. In the light of the heavy financial investment needed and the financial constraint of the Government, a shared funding model was proposed through which the parents and students will share by paying higher tuition fees for tertiary education, and the community will share through the general revenue of the Government.
- 12.2 Independent of the development of the new academic structure, the Government has indicated the need to gradually bring the senior secondary school fee level back to 18% of recurrent cost according to the prevailing policy as compared to the existing cost recovery level at about 15%.
- 12.3 It is the Government's commitment that no student will be denied the opportunity to study due to lack of means. Financial assistance will continue to be provided to assist needy students, and the Government will explore new arrangements in the student financial assistance schemes to facilitate students' continuing study.

Support

12.4 While any proposed increase of tuition fee is deemed controversial, the principle of the shared funding model is generally supported insofar as the tuition fee level is reasonably set and is affordable for parents and the community.

Concerns

12.5 On the annual university tuition fee level at \$50,000 (at 2005 prices) indicated in the Main Document, there is concern that the tuition level is high, and that it is now too early to set the tuition level to be applied only upon commencement of the new 4-year undergraduate programme after 2012.

12.6 With the senior secondary school fee level brought back to 18% of recurrent cost and with the proposed university tuition fee for the 4-year undergraduate programme, parents are generally concerned that their financial burden in the future will be significantly heavier than now. The pressure on low-income families will be particularly felt.

12.7 In the case where tuition fees must be increased, general feedback is that the increase should be effected in a gradual manner, and more financial support should be provided to students in need, including more scholarships for students and more flexible loan repayment arrangements.

12.8 There are requests that more resources be set aside for the new academic structure, in addition to those indicated in the Main Document, for schools

- to prepare for and migrate to the new curriculum, including minor school-based modifications of special rooms and laboratories to meet different subject requirements;
- to arrange teacher training during the preparation years; and
- to hire sufficient teachers for flexible groupings of students for some NSS subjects, like Liberal Studies, and to provide for more diversified learning

for students at schools.

The Way Forward

The Shared Funding Model

- 12.9 The principle is generally accepted that the community and the parents of students who are going to benefit directly should share the costs of the new academic structure. The key consideration is what level of tuition fee is generally considered as reasonable and fair share.
- 12.10 It should be noted that the annual university tuition fee level at \$50,000 (at 2005 prices) stated in the Main Document (compared with the existing tuition fee level of \$42,100) is indicative in nature, showing what may be the reasonable and affordable tuition fee level for tertiary education. On the basis that a shared funding model is accepted in principle by the community, the Government will review the tuition fees for the new undergraduate programme nearer the time.
- 12.11 The Government will review the current arrangements of the student financial assistance schemes including the assistance level, and the loan and repayment arrangements, to ensure that no students will be deprived of the opportunity of learning due to lack of means. We will conduct a public consultation on the proposed tuition fee level for the new 4-year programme and the corresponding changes to the student financial assistance schemes, before we come to a final view on the tuition fee level in the last quarter of 2011 at the latest for implementation in the 2012/13 academic year.
- 12.12 While the current policy of setting 18% of recurrent cost for senior secondary school fee is independent of the decision to move to the new 3-year senior secondary programme, the Government will give due regard to the affordability and the pace of adjustment of the school fee. Government will bring the senior secondary school fee level back to 18% of recurrent cost at a measured pace, tentatively over a period of four years starting from the 2005/06 school year.

Funding requirements

Recurrent funding

12.13 Assuming that the tuition fees for the new 4-year undergraduate programme were set at \$50,000 per annum (at 2005 prices), and that the tertiary institutions are to achieve maximum cost efficiency in the provision of the additional year of undergraduate programme taking into account economy of scale and new learning approaches of an integrated programme, the Government is prepared, under a shared funding model, to provide about \$1.1 billion on a recurrent basis upon full implementation of the new academic structure to meet the additional funding requirements of the tertiary institutions, while the parents will contribute about \$0.7 billion through tuition fees.

12.14 As for the school sector, there has been a misconception in some of the feedback received that the funding model proposed by the Government is to redirect resources freed up from the projected decline in secondary student enrolment to fund the 4-year undergraduate programmes. This has never been the Government's intention.

12.15 Indeed, we have been planning on the basis of redeploying recurrent savings arising from the projected decline in secondary student enrolment and reduction in the number of classes to finance a number of new initiatives to support and sustain the NSS, including the following:

- to facilitate school arrangements for flexible student groupings, in particular for the learning and teaching of Liberal Studies (see Chapters 4 and 11);
- to support schools in offering diversified courses and learning opportunities to their students (see Chapters 5 and 11);
- to support schools in catering for student diversity, including those with special educational needs (see Chapters 6 and 11); and
- to improve the teacher-to-class ratio for senior secondary levels after the

double cohort year (see Chapter 11).

12.16 We estimate that upon full implementation of the new academic structure in 2015, the above improvement measures would cost about \$900 million on a recurrent basis. Funding-wise, the additional financial requirements will be met by savings from the reduction of number of class when secondary student population declines progressively, and by ensuring viable school class structures in the coming years (para. 11.21-11.25). Because of these improvements and declining student population, we expect a higher unit cost for senior secondary education, which would have an impact on the level of tuition fees under the existing cost recovery policy.

Non-recurrent funding

Capital works

12.17 We estimated in the Main Document that about \$3.4 billion will be required for the construction of additional complexes and facilities to accommodate undergraduate students pursuing an extra year of study. While the UGC-funded institutions have yet to finalise their plans, it appears that the original estimate is on the low side having regard to site constraints in some institutions and complexity of large-scale campus developments. Each project will be justified on its individual merits and technical feasibility, and subject to availability of land and resources as well as funding approval by the Finance Committee of the Legislative Council. We will also continue to encourage the institutions to seek private funding for their ongoing campus development and enhancement works.

12.18 For the school sector, some modification work to the physical structure of schools would be required to provide suitable accommodation for flexible grouping of students for certain NSS subjects, including Liberal Studies. Some training centres currently operated by vocational training institutions would also need to be renovated to support diversified learning and COS.

12.19 Taken together, we now estimate that a capital expenditure of about \$3.5 billion would be required, or \$100 million above the original estimate.

Non-works expenditure

12.20 Additional resources will also be allocated for the one-off development and transition costs over the years leading to full realisation of the NSS. The UGC-funded institutions would require about \$550 million to prepare for the changes in curriculum, for revised student admission procedures and other necessary preparation, including engaging additional academic, administrative and professional staff.

12.21 Having reviewed the level of resources for the NSS and considered feedback from the public, in particular from the school sector, we propose to earmark additional resources for the NSS on top of those indicated in the Main Document. This includes \$1.7 billion non-recurrent funding before the NSS is put fully in place for a number of new initiatives, including:

- professional training for teachers on the NSS and assessment, particularly school-based assessment;
- cash grants for schools to arrange for an NSS co-ordinator to help co-ordinate the change process, provide training relief to release serving teachers to attend professional training, procure services that can increase the professional capacity of teachers, procure learning and teaching materials and other necessary equipment for migration to the NSS (see Chapter 11);
- developing, accrediting and piloting diversified learning and career-oriented studies; and
- NSS curriculum development.

12.22 Taken together, we estimate that a non-recurrent non-works expenditure of about \$4.4 billion would be required, including about \$1.9 billion for additional senior secondary school places for the transitional years, particularly the double

cohort year. This is about \$1.1 billion above the original estimate.

12.23 The Government will seek necessary funding approval, and will ensure that resources will be deployed in the most effective ways to best serve the interest of students.

Chapter 13 Managing Change: Participation, Communication, Critical Milestones and Coherence-making

This chapter presents how the “3+3+4”, as a complex change, is going to be carried out and managed in a strategic manner to realise its vision. Like other systemic reforms, while the goals and directions and planned actions are set out with a degree of certainty, the implementation needs to be flexible enough to enable us to learn from experiences and respond to the changing contexts that are characteristic of contemporary Hong Kong society. The strategies for managing change will include: participation and communication, the critical milestones, periodic review for timely responsive adjustment and coherence-making to ensure that we can realise the ultimate goals.

(A) Participation and Communication

Original Proposal

13.1 Participation and communication go together. The consultation on “3+3+4” has invited the participation of a wide range of stakeholders and involved substantial discussion using various communication means. The same spirit of community-wide participation and active communication will be upheld in the preparation and implementation of “3+3+4”.

Support

13.2 The public and the media have widely supported the way in which the consultation was conducted since it covered a wide range of stakeholders and has used different communication and interaction strategies (see Chapter 1). Hence, a continuous dialogue between EMB and the public regarding the future progress of “3+3+4” is deemed useful for the information and understanding of every party.

13.3 A number of sectors in the community, organisations and professional bodies have shared that education reform is not only the responsibility of schools and teachers but of the whole community. They have volunteered their expertise to support the “3+3+4” in one way or another as appropriate to the needs of teachers and schools.

Concerns

13.4 It is suggested that we should collaborate more with the business sector to provide students studying COS with more practical training opportunities and to support student learning experiences outside schools.

13.5 Parent education could be further strengthened to help the reform.

13.6 Apart from parents, the community, including business or industrial sectors should also share in the funding for implementing the reform measures.

13.7 The Government should encourage more investment/sponsorship of university researches and other learning activities in schools.

The Way Forward

Participation – working hand in hand

13.8 The reform of the new academic systems will succeed when the whole community in Hong Kong contributes to it and if there is an effective sharing of effort and expertise.

Government and non-government organisations

13.9 The HKSAR Government sees education as an investment in our next generation and considers that it has responsibility to take a leading role in preparation and implementation.

13.10 EMB will take the lead and facilitate all actions designed to take “3+3+4” forward as set out in this Report.

13.11 EMB will promote and co-ordinate the contribution of relevant government departments and NGOs to provide professional development opportunities for teachers and to provide appropriate learning experiences for students, for example, COS and other learning experiences, for whole-person development.

Principals and vice-principals

13.12 Principals and vice-principals are holding positions which influence cascading of change in schools. School leaders should:

- use the guiding principles set out for NSS in this Report to develop coherent short-term and long-term school development plan aligning the school aims, the needs, interests and abilities of students; adjusting the focus of education and curriculum reform, staff development plan, expected achievements of the school suited to the school and community contexts;
- take part in professional development programmes on NSS specifically designed for them in order to have more information and reflective opportunities for further on-going planning and decision-making;
- develop/join networks of principals/deputy principals to serve as change agents/helpers for each other (collaborative learning);
- collaborate, if necessary, with other schools in the same region to offer subjects with lower demand so as to provide more choices for students;
- create space for teachers so that they can focus on developing their own professional development plans according to their needs and the future needs of their school and their students;
- continue to carry out curriculum and assessment reform at junior secondary levels to pave the way for the new change; and
- communicate with parents, students and colleagues regularly on the changes needed.

Teachers

13.13 Teachers are change agents who have the most direct impact on student learning.

They should:

- understand the curricula, the needs of their students, and keep abreast of changes;
- employ learning and teaching strategies that suit the curriculum aims and learning needs of students, and widen their teaching repertoire;
- support colleagues in the schools through sharing and collaborative lesson preparation to build up the collective professional capacity of the teaching force;
- explain to students the choices and opportunities that lie ahead of them; and
- join subject associations to contribute their expertise and provide feedback on KLA/subject development as it proceeds.

Parents

13.14 Parents lend valuable advice to their children and support studies most suited to their aspirations. They should:

- read school communications and keep in touch with the school and teachers;
- understand the needs, interests and abilities of their children and help them choose the appropriate student programme in consultation with schools; and
- show support to school and teachers, including supporting meaningful homework of students and contribution to activities with teachers.

Post-secondary and higher education institutions

13.15 Post-secondary and higher education institutions provide important post-school pathways for graduates of the NSS education. They should:

- contribute their professional views on the curriculum development of the NSS subjects, the learning and teaching processes, assessment and recognition of students achievements;
- ensure that the interface between the NSS education and post-secondary and higher education is coherent and well coordinated; and
- provide balanced education to students to fulfil the mission of individual higher education institution in the new system.

Professional bodies

13.16 Professional bodies could contribute to NSS through appropriate feedback mechanisms or supporting initiatives. They should:

- contribute their professional views on the proposed curriculum changes as regards articulation to further study and work;
- take part in providing professional development opportunities for teachers, principals and parents; and
- provide feedback to curriculum evaluation.

Employers

13.17 Employers have a more important role to play in education than before as the “3+3+4” is closely and dynamically aligned with the changes and needs of economy and society. As part of the system, employers should:

- take into consideration all learning experiences of students and broaden recruitment criteria;
- contribute to enriching life-wide learning opportunities that keep pace with

the needs of curriculum development;

- contribute to the development and recognition of COS;
- provide work experience opportunities for students; and
- provide feedback to the Government on students' capabilities in the workplace and on areas requiring improvement.

Students

13.18 Senior secondary students, with the facilitation of the above groups, should take charge of their own learning to fully realise the benefits of “3+3+4”. They should:

- provide feedback to teachers on how to help them learn better;
- contribute, along with schools, teachers and other parties to their own whole-person development;
- pursue study in both academic and other learning experiences and avoid devoting all effort to prepare for examinations only; and
- engage as a life-long learner.

(B) Communication Means

13.19 Communication with the different stakeholders above will be maintained and in particular, parents of students currently in P5 will be updated periodically as the NSS system is rolled out. Communication will be effected by means of:

- A Web-based bulletin board
- Formal advisory bodies such as EC, CDC, SCOLAR
- Regular liaison meetings with different parties
- Visits to schools
- Other forms of submission

(C) Critical Milestones and Coherence-making

Original Proposal

- 13.20 A minimum lead-time of 4 years is necessary to have the critical conditions for the reform in place.
- 13.21 The set of critical milestones includes the 2nd consultation exercise on curriculum and assessment details of subjects, provision of C&A Guides, announcement of university admission requirements, review and recommendation of textbooks, and provision of professional development programmes for teachers and principals.
- 13.22 The new SS1 level was proposed to be implemented in September 2008, the earliest date possible with the first cohort of SS3 students entering the 4-year first degree at university in September 2011.

Support

- 13.23 The tertiary sector strongly supports implementation in 2008.
- 13.24 According to the survey administered by EMB to 471 secondary schools, about 60% of secondary schools are ready to implement the NSS structure in 2008 and about 30 % prefer 2009 or after.
- 13.25 School councils representing the majority of secondary schools in Hong Kong have indicated a preference to implement “3+3+4” in 2008 on condition that a number of supportive conditions such as professional development programmes and funding are available.
- 13.26 There is general support from parents and other community sectors on implementation in 2008.
- 13.27 There is a higher tendency for the business community to support an early implementation.

Concerns

- 13.28 Some people doubt whether a 4-year preparation period is long enough.
- 13.29 There is concern whether teachers have enough preparation time to implement the new curriculum.
- 13.30 For those who do not support 2008 as the year of implementation, there are diverse views on the implementation years (from 2009, 2010, 2011 or 2012).
- 13.31 More preparation time is deemed necessary for the professional development of teachers and writing of textbooks.
- 13.32 Implementation time should be flexible depending on the availability of adequate resources.
- 13.33 The reform measures should be implemented in stages.

The Way Forward

A start date for the new academic structure

- 13.34 The tertiary institutions, while indicating their preference for the earliest start possible, acknowledged that a critical success factor would be the preparation of schools for the change.
- 13.35 Feedback from the consultation exercise and school surveys indicated that about 60% of secondary schools generally supported implementation in 2008 and about 30% preferred deferring the implementation to 2009 or after. Follow up interviews with schools preferring a later start indicated their preference was based on the consideration that another year would provide more time for teachers to prepare and for the necessary planning for any changes to class structure.
- 13.36 The realisation of the learning goals of the NSS programme is critically dependent on the professional preparation of teachers and school planning for a smooth change. We must ensure that all the supporting measures are in place,

including professional preparation of teachers, high quality textbooks and learning and teaching resources and changes in class structures before we can proceed.

13.37 In view of the magnitude and the far-reaching impact of the reform, we need to ensure that all schools and relevant parties are ready. After striking a balance of various considerations, the Government has decided that the new SS1 level will be implemented in September 2009 and the first administration of the HKDSE will be in the school year of 2011/12. The first cohort of SS3 students will enter the 4-year undergraduate programme at university in September 2012.

13.38 By starting the new academic structure in 2009, we are confident that the interests of students will be served.

Critical milestones – heading towards implementation in 2009

(See Table 13.1 overleaf)

Review – responsive actions

13.39 A regular review process will be an essential feedback mechanism for determining whether adjustments are necessary.

13.40 There will be on-going review of the processes leading up to each critical milestone. Inputs from local and international consultants and stakeholders will be sought, focus group meetings will be organised, curriculum visits made, and regular review/evaluation will be used to provide formative feedback. Timely actions could be considered to ensure that each critical milestone is achieved.

Table 13.1: Critical Milestones for Key Actions

Key Actions	2005	2006	2007	2008	2009
Policy on “3+3+4”	Final report issued in May				First cohort of new SS1 students in September (Entry to 4-year first degree at university in September 2012)
Curriculum Design	Finalise curriculum aims and design for all subjects for the 2nd consultation of detailed curriculum and assessment framework in mid 2005.	Completion of C&A Guides for all subjects and NSS Curriculum Guide.			
Assessment and Examination	← Development of standards-referenced assessment →				
	Initiate the school-based assessment framework for subjects that are ready.			Handbook and Regulations for HKDSE to schools	
Textbook and Learning/ Teaching resources	← Start textbook writing and development of learning/teaching resources →				Recommended textbooks and learning/teaching resources available by beginning of 2009
University Admission Criteria	General university admission criteria to schools in mid 2005	Specific requirements at faculty/ programme level to schools in mid 2006			
Professional Development	Professional development programmes for teachers and principals will be undertaken in a timely manner to ensure adequate preparation for the change. All teachers will have completed the necessary training by September 2008.				
Class Re-structuring	Discuss with schools on a case-by-case basis the class structure for next school year with a view to implementing the new academic structure in 2009/10 school year.				
Staff Establishment			Implement new staff establishment as agreed for the transition and ongoing years.		

13.41 There will be collaboration across the Government, universities, professional experts, teachers and schools in research and development ventures to generate informed practice and experiences for building up the capacity of different parties to carry out the reform.

13.42 Evaluation on the implementation of “3+3+4” structure, including NSS, will be conducted in light of data obtained including those obtained from the first new examination.

Further consultation

13.43 As part of the on-going communication process leading to the critical milestones, a more focused consultation on the following will be conducted soon after this Report is released:

- (a) 2nd Consultation exercise on the curriculum details and assessment mode of the proposed subjects.
- (b) Consultation on specific issues requiring further development such as COS and the needs of students with SEN. (See Chapters 5 and 6)
- (c) Discussion with laboratory technicians and workshop teachers over their future roles and duties. (See Chapter 11)

Coherence-making

13.44 The “3+3+4” reform is an integral part of the total Hong Kong education reform. To ensure coherence of measures and actions set in the context of other current reforms, special attention has to be paid to the following aspects:

4-year undergraduate programmes

13.45 The tertiary institutions will review their undergraduate programmes, human resources plan and campus development plan in order to ensure a smooth transition from NSS to the 4-year undergraduate programmes.

The impact of existing policies and processes

13.46 EMB needs to align policies and the impact of these policies on schools including:

- revision of the JSEA System;
- reviewing the Education Ordinance/Regulations/Code of Aid to determine whether any amendments are necessary to facilitate the implementation of the NSS curriculum in schools;
- the learning environment of students with SEN and the structure of secondary schooling in different types of special schools;
- Quality Assurance inspections including External School Review to focus where appropriate on assessing school needs for implementation of “3+3+4” and provide necessary advice;
- teacher education, principal training and CPD measures to help schools and teachers prepare for the NSS curriculum;
- the timing of the MOI policy to allow schools to prepare for NSS in their appropriate language medium; and
- school-based management policy provides schools with greater flexibility and autonomy in the use of funds for preparing for implementing NSS.

Summary of Major Concerns
Consultation on Reforming the Academic Structure
for Senior Secondary Education and Higher Education

New Academic Structure

Concerns	The Way Forward
<ul style="list-style-type: none"> ● Schools and teachers might not be ready for the implementation of the reform in 2008. The reform of the academic structure should not proceed simultaneously with the reform of the curriculum and assessment. ● The reform of the academic structure and senior secondary curriculum may impose heavy workload on teachers. ● Teachers indicate strong need for the provision of quality professional development opportunities and timely support for the implementation of the new curriculum. 	Para. 2.14

Curriculum

Concerns	The Way Forward
<p><i>Continuity of Curriculum Reform in Basic Education (P1 – S3) with New Senior Secondary Curriculum (NSS)</i></p> <ul style="list-style-type: none"> ● The continuity in the curriculum between the Basic Education (P1-S3) and the NSS should be spelt out more clearly. 	Para. 3.4 - 3.5
<p><i>Curriculum Framework and Choices in NSS</i></p> <ul style="list-style-type: none"> ● The curriculum should strike a balance between breadth and depth of knowledge. ● More closely guided choices such as requiring combination of some elective subjects from different KLAs should be provided. ● There should be basic and advanced components in the curriculum so that students can take more “subjects” and choose different components according to abilities. ● Students should be allowed to take more elective subjects. ● Different curricula within subjects should be provided for students with different abilities/backgrounds. 	Para. 3.12 - 3.19

Concerns	The Way Forward
<ul style="list-style-type: none"> ● The moral development of students needs to be continuously strengthened, and positive values and attitudes need to be nurtured in Hong Kong students. 	
<p><i>The Knowledge Base, Chinese Culture, Sciences and Other Proposed Elements of Learning</i></p> <ul style="list-style-type: none"> ● The cultural elements in Chinese language appear to be weakened in the NSS curriculum. ● The free choice of elective subjects among arts and science subjects may lead to students failing to have sufficient knowledge in physics, chemistry and biology in some university programmes. ● Certain themes in the NSS such as environmental education, legal education and consumer education should be strengthened. 	Para. 3.27 - 3.28
<p><i>Language Standards, Putonghua and Other Languages</i></p> <ul style="list-style-type: none"> ● The language standards of Hong Kong students would be lowered as the percentage of time allocated to Chinese Language and English Language seems to be less than before. There is also concern that Putonghua (PTH) is no longer an examination subject. ● As Hong Kong is a cosmopolitan city, more encouragement should be given to the study of languages other than Chinese and English. The needs of ethnic minorities in learning Chinese need attention to ensure that students can integrate more effectively into the Hong Kong community. 	Para. 3.32 - 3.35
<p><i>Catering for Learner Differences and Students with Special Educational Needs</i></p> <ul style="list-style-type: none"> ● The NSS curricula would not be able to cater for a diverse range of student abilities in schools as students not expected to study sixth form in the past would now have to stay in school for one more year. ● There is little information provided on how to cater for students with special educational needs in either ordinary or special schools. The issue of equal opportunity for all will have to be addressed. 	Para. 3.39 - 3.40

Concerns	The Way Forward
<p><i>Development of Career-oriented Studies</i></p> <ul style="list-style-type: none"> ● Career-oriented Curriculum (COC) and Yi Jin/Secondary Schools Collaboration Project, which are both being piloted, should be described more fully regarding their future development. They should also be made an integral part of the overall senior secondary curriculum in schools. 	Para. 3.43
<p><i>Time Allocation</i></p> <ul style="list-style-type: none"> ● Different views on the proportion of time allocated to the learning of core subjects and how the learning time for other learning experiences might be allocated more flexibly. 	Para. 3.46 - 3.50
<p><i>Names of Subjects</i></p> <ul style="list-style-type: none"> ● With the revision of the curriculum framework, the names of some subjects such as Home Economics and Liberal Studies may not reflect the essence of these subjects. 	Para. 3.53
<p><i>Further Consultation and Guidance</i></p> <ul style="list-style-type: none"> ● As the changes in the NSS curriculum are complex, there should be guidance provided to schools. 	Para. 3.56 - 3.57

Liberal Studies

Concerns	The Way Forward
<p><i>The Position of Liberal Studies in the NSS curriculum</i></p> <ul style="list-style-type: none"> ● Other subjects can also serve the purpose of developing critical and independent thinking among students. ● Diverse views among academics regarding the different traditions and interpretation of Liberal Education and General Education. 	Para. 4.10 - 4.12
<p><i>Balancing Breadth and Depth</i></p> <ul style="list-style-type: none"> ● As the subject is new and demanding to most teachers and students, nine core units and six elective units are too much for teachers and students to cope with. 	Para. 4.15 - 4.17
<p><i>Curriculum Design, Framework and Time Allocation</i></p> <ul style="list-style-type: none"> ● There are too many core units. The coverage of the knowledge embedded within them will not be deep enough, and there will not be sufficient time for discussion and the development of 	Para. 4.22 - 4.23

Concerns	The Way Forward
<p>independent thinking skills.</p> <ul style="list-style-type: none"> As Liberal Studies is a new core subject, the design should be trimmed and the subject should only take up about 10% of the lesson time of students rather than 12.5% as originally recommended. 	
<p><i>Knowledge Base and Connection with Skills, Attitudes and Values, and Rational Thinking</i></p> <ul style="list-style-type: none"> The subject should help promote positive values and attitudes, and the core values need to be included as essential for the success of Hong Kong. The knowledge base of the subject is insufficient for supporting discussion of the issues, broadening students' perspectives and developing rational thinking. The issue-enquiry approach may not help expand the knowledge base. Some feel that the spirit of "arts" for "sciences" and "sciences" for "arts" is lost. 	Para. 4.28 - 4.36
<p><i>The Issue-enquiry Approach</i></p> <ul style="list-style-type: none"> Query whether senior secondary students will have any experience of the issue-enquiry approach. The use of issue-enquiry approach will only encourage the development of a culture of "criticism" that is not constructive to society. Instead, more positive values and attitudes should be emphasized. Worry that too high demands and expectations will be placed on students in the approach. 	Para. 4.42 - 4.46
<p><i>Assessment and Examination</i></p> <ul style="list-style-type: none"> Reservations about the objectivity of public assessment of the subject, and worries about the potential increase in teacher workload. Liberal Studies should be an elective subject, and assessed and reported at fewer levels, for example "pass" and "fail" at least in the initial years of implementation or graded as "outstanding", "satisfactory" and "unsatisfactory". Widespread concerns among teachers about being held accountable for the assessment of student performance in a subject seen as new and unknown by most people. There should be 	Para. 4.52 - 4.58

Concerns	The Way Forward
<p>effective provision of professional development and training in this area.</p>	
<p><i>Student Access to Learning Opportunities</i></p> <ul style="list-style-type: none"> ● Students from lower socio-economic status families might be discriminated against, because they will not have access to the same level of updated learning resources and outside-classroom learning experience as those from better-off families. There are also worries that these students, and those of lower language ability, will be disadvantaged. ● As the learning and teaching of Liberal Studies involves a lot of classroom discussion, it is important to introduce “small class” teaching in the subject. ● Students may not have opportunities to choose areas that they are interested as there are too many core units. 	<p>Para. 4.63 - 4.65</p>
<p><i>Professional Capacity of Teachers and Schools</i></p> <ul style="list-style-type: none"> ● Worry in teachers if they have the necessary skills and knowledge to guide students in learning how to learn. They are also concerned about the workload involved in preparing updated learning and teaching materials for Liberal Studies, and in the individual supervision of the Independent Enquiry Study in a large class. ● Worry in some teachers that they would lose their subject identity, and run the risk of not being able to help students get good results in public examination. ● Diverse views on whether the proposed staff development and training hours for Liberal Studies teachers are adequate. Some are worried that demand for these may exceed the supply. ● Concern from the sector is that if the subject takes up about 12.5% of the curriculum, this will involve reshuffling of duties within schools which may lead to the discomfort of some teachers. It may encourage school heads to use it as an excuse to stop offering certain subjects. 	<p>Para. 4.71</p>
<p><i>Learning and Teaching Resources Development</i></p> <ul style="list-style-type: none"> ● Given the fact that the learning and teaching materials need to be updated continuously, teacher workload is seen as excessive and 	<p>Para. 4.75 – 4.76</p>

Concerns	The Way Forward
<p>teachers may not have the time to prepare them.</p> <ul style="list-style-type: none"> ● Poorer students may not be able to afford the range of learning and teaching resources recommended for study. 	
<p><i>Development of Reference to International Research</i></p> <ul style="list-style-type: none"> ● Concern about the sufficiency of local experiences and precedence in other countries to support the implementation of Liberal Studies in the new academic system. 	Para. 4.79

Career-oriented Studies (COS)

Concerns	The Way Forward
<p><i>Position of COS in the NSS Curriculum</i></p> <ul style="list-style-type: none"> ● COS is a form of vocational training that is commonly regarded as suitable only for less able students. Such labelling might deter schools from offering COS. 	Para. 5.12 - 5.26
<p><i>Recognition</i></p> <ul style="list-style-type: none"> ● The qualifications acquired by students completing COS courses should be recognised both by the institutions for progression to further studies and by the trade for employment purpose. ● To ensure that COS has a comparable status with other elective subjects in the NSS and to maximize the benefits to students, acceptance by different stakeholders is crucial. 	Para. 5.30 - 5.38
<p><i>Provision, Funding and Student Choice</i></p> <ul style="list-style-type: none"> ● Concerns as to whether COS courses will be sufficiently diverse, and whether the courses will be kept up to date to accord with the changing needs of the economy, society, and the manpower development of different industries. ● The COC being piloted is not subsidized by the Government. Students (and their parents) and schools are expecting additional funding so that more students can benefit from COS courses. 	Para. 5.42 - 5.45
<p><i>Support to Students</i></p> <ul style="list-style-type: none"> ● As the students' learning experiences in COS will be different from those in conventional curricula, special support to guide students on how best to make choices appropriate to their interests 	Para. 5.50 - 5.55

Concerns	The Way Forward
<p>and aptitudes is necessary.</p> <ul style="list-style-type: none"> ● Concern as to whether the core subjects Chinese Language, English Language and Mathematics would be geared towards the needs of students with a strong inclination towards studying mainly COS as their elective studies. ● Concern as to whether students from non-Chinese speaking ethnic minorities, and those with special educational needs in ordinary schools, will also benefit from COS. 	
<p><i>An Adequate and Competent Teaching Force</i></p> <ul style="list-style-type: none"> ● Worry that external providers might not have the capacity to provide all COS needed by schools. ● Concern in teachers whether there will be enough professional development opportunities for instruction in COS, and whether they will be given time-off to take courses and undertake attachments to specific trade or industries. 	<p>Para. 5.59 - 5.62</p>

Stretching Student Potential and Catering for Learner Differences

Concerns	The Way Forward
<p><i>Special Education</i></p> <ul style="list-style-type: none"> ● EMB should review the curriculum, assessment, teacher development and other support services for special education under the “3+3+4” structure, having regard to the provision for the ordinary schools and the specific needs of the educational services pertaining to the students with special educational needs (SEN). ● Concern as to whether students with SEN will be provided with pathways for future studies and career training, and as to how their achievements will be given due recognition through certification and accreditation of specific studies. ● Concern about how all students could benefit under “3+3+4”, including those who have severe mental disabilities. ● The academic structure for mentally handicapped (MH) students whose learning will be supported by an IEP should be on a par with students with SEN in ordinary schools who are able to participate in 3 years of junior and 3 years of senior secondary curriculum. 	<p>Para.6.12 – 6.44</p>

Concerns	The Way Forward
<ul style="list-style-type: none"> ● Special schools including MH schools should receive similar provisions as their counterparts in ordinary schools, such as support for diversification of the curriculum and support for Liberal Studies. ● Students with specific learning difficulties should be regarded as students with SEN and be provided with the necessary support. 	
<p><i>Gifted Education</i></p> <ul style="list-style-type: none"> ● Gifted students should be provided with opportunities and support as appropriate or else they would be de-motivated and become under-achievers. ● The development of gifted students should be catered for in the NSS. Flexibility should be given for them to sit public examination earlier. ● The existing schemes for gifted students should continue under “3+3+4” structure. 	Para.6.49 – 6.59

Assessment and Certification

Concerns	The Way Forward
<p><i>The Single Credential</i></p> <ul style="list-style-type: none"> ● Concern that moving from two examinations to one may increase rather than decrease examination pressures on students. ● Some parents, schools and school councils have suggested maintaining the Hong Kong Certificate of Education Examination (HKCEE) and Hong Kong Advanced Level Examination (HKALE) beyond the introduction of the Hong Kong Diploma of Secondary Education (HKDSE) to guarantee more opportunities for repeaters. 	Para.7.11 - 7.14
<p><i>Standards-referenced Reporting</i></p> <ul style="list-style-type: none"> ● Given the larger candidature likely to be enrolled in the HKDSE examination and the smaller number of Levels relative to the current number of Grades, there is some concern that five levels will be insufficient for tertiary selection purposes. 	Para.7.18 - 7.23

Concerns	The Way Forward
<ul style="list-style-type: none"> ● Given that the current HKALE caters for a relatively small elite group of candidates, there is a concern that standards in the HKDSE should be set with reference to the full range of aptitudes and abilities among students. 	
<p><i>School-based Assessment (SBA)</i></p> <ul style="list-style-type: none"> ● Principals and school councils have suggested that SBA should not be applied to all subjects and the weighting proposed for SBA (20-30%) is too high, at least in the first instance, given uncertainties about the quality of SBA. ● SBA will change the teacher-student relationship from one of partnership to one in which the teacher is the assessor. ● Concerns from a wide spectrum of stakeholders that SBA will increase teacher and student workload. ● Concerns from many that students will submit work that is done by someone else (cheating). ● There is uncertainty regarding the form that moderation will take and concern that assessments provided by different schools will not be comparable. ● There is uncertainty as to what will happen to private candidates given SBA in all subjects. ● Concerns that teachers do not know how to carry out SBA in a consistent and effective manner. 	Para.7.32 - 7.43
<p><i>Recognition of the HKDSE</i></p> <ul style="list-style-type: none"> ● Strong desire among parents, teachers and principals that tertiary selection details be announced as soon as possible. ● Widespread concern to ensure there will be international recognition of the new HKDSE, and that this recognition be secured for the first cohort of candidates awarded the new credential rather than granted retrospectively. 	Para.7.48 - 7.51
<p><i>Senior Secondary Student Learning Profile</i></p> <ul style="list-style-type: none"> ● Concern about the different ways of interpreting the student learning profile. ● Concern about whether the student learning profile should include remarks from schools on the general performance of a student, 	Para.7.59 - 7.64

Concerns	The Way Forward
<p>such as services engaged, attitude towards learning and conduct. Some believe that the inclusion of these elements help encourage whole-person development while others argue that these elements cannot be assessed and recorded objectively.</p> <ul style="list-style-type: none"> ● Some principals remark that an unbalanced profile would not give a fair reflection of a student’s strength and weakness. ● Incorporating “other learning experiences” in a student learning profile may disadvantage the students from low-income families. ● Concern about how data pertaining to the student learning profile should be stored, processed and authenticated. 	

Interface between Senior Secondary Education and Higher Education, and Articulation with Local and Overseas Education Systems

Concerns	The Way Forward
<p><i>University Admission</i></p> <ul style="list-style-type: none"> ● Considerable concern about the university/faculty admission criteria, and schools in particular urge for early release of the admission criteria. ● General recognition that university admission criteria may carry negative wash-back effect on student choices, and in particular its impact might marginalise some subjects and inadvertently maintain heavy streaming towards science subjects. ● Concern as to whether universities should consider including Liberal Studies as one of the subjects for admission. ● Concern about the weighting of the NSS “Science” subject for admission to universities, compared to Physics, Chemistry and Biology. ● Universities should not set any entrance examination in addition to the HKDSE. 	<p>Para.8.16 – 8.24</p>
<p><i>International Benchmarking and Recognition</i></p> <ul style="list-style-type: none"> ● Concern about the interface between the NSS education and overseas universities and how international recognition of the new HKDSE could be obtained. ● Concern as to whether exemption or credits from other qualifications such as International Baccalaureate Diploma would 	<p>Para.8.28 – 8.40</p>

Concerns	The Way Forward
be provided by universities in the new 4-year undergraduate programme.	
<i>Articulation to Post-secondary Studies and Vocational Training Institutions</i> <ul style="list-style-type: none"> ● Smooth articulation between NSS and post-secondary sub-degree and undergraduate programmes should be ensured. 	Para. 8.43 – 8.44
<i>Moving to Four-year University Programmes</i> <ul style="list-style-type: none"> ● Concern about the specific articulation arrangements in the transition years, especially the double cohort year. 	Para. 8.48 – 8.50

Supporting Measures

Concerns	The Way Forward
<i>Enhancing the Teaching Profession</i> <ul style="list-style-type: none"> ● Concern about the timeliness and quality of professional development programmes, and the adequacy of places for teachers and trainers (in particular for Liberal Studies). ● 35-100 hours of professional development is not sufficient for Liberal Studies teachers. ● Supply teachers to support the block time day-release mode of intensive professional development, in particular for teachers of Liberal studies, should be provided. ● The impact of the changes on teacher workload needs to be addressed. 	Para.9.13 – 9.23 Para 9.25 – 9.28 Para 9.31 – 9.33
<i>Textbooks, Quality Learning and Teaching Resources</i> <ul style="list-style-type: none"> ● The availability, readiness and quality of textbooks for the new curriculum are crucial ahead of time before implementation. ● The price of textbooks should be lowered. ● EMB should help to provide copyright-cleared learning materials and set up a “Resources Sharing Centre” to promote Liberal Studies and COS. 	Para. 10.8 – 10.20
<i>Provision of School Places</i> <ul style="list-style-type: none"> ● Since asymmetrical and symmetrical schools will continue to co-exist when the new system is implemented, there is concern 	Para. 11.4 – 11.8

Concerns	The Way Forward
<p>whether processes are available to facilitate the placement of students to other schools if necessary at the end of S3 and for continuation to SS1.</p>	
<p><i>Class Size</i></p> <ul style="list-style-type: none"> ● Some schools hold the view that the benefits of the senior secondary curriculum, with its emphasis on more flexible elective choices, school-based approaches to assessment and student-oriented learning pedagogy, could not be fully realised in large classes. A class size of less than 40 is preferred. ● Small group teaching for subjects in the new curriculum is proposed, in particular Liberal Studies which will involve more discussion and project work. 	<p>Para. 11.13 – 11.14</p>
<p><i>Class Structures</i></p> <ul style="list-style-type: none"> ● Class restructuring for some schools may lead to reduction in the number of classes and hence the staff entitlement, resulting in surplus teachers. ● Concern about the balance of symmetrical and asymmetrical structures and thus the impact on student enrolments in individual schools. ● The number and distribution of senior secondary schools in the future is a compounding factor in evolving class structures. ● Some senior secondary schools have asked for allocation of S1 students, while other schools seek to transform into senior secondary schools. 	<p>Para. 11.21 – 11.25</p>
<p><i>Teacher-to-class Ratios and Related Matters</i></p> <ul style="list-style-type: none"> ● Great concern about the proposed change in teacher-to-class ratios and the 4/5 rounding as it might lead to staff redundancy in some schools. ● Concern about the ranking and promotion issues and the existing graduate to non-graduate ratio arising from the proposed teacher-to-class ratios. ● Concern whether the total teaching staff available to the schools is sufficient to meet the objectives set out for the senior secondary reform. 	<p>Para. 11.33 – 11.59</p>

Concerns	The Way Forward
<ul style="list-style-type: none"> ● Concern about the implementation details for the proposed Senior Secondary Curriculum Support Grant and Diversity Learning Grant, the relationship of those resources to teaching staff establishment and arrangements for laboratory technicians and workshop teachers. 	
<p><i>Funding</i></p> <ul style="list-style-type: none"> ● The tuition level is high, and that it is now too early to set the tuition level to be applied only upon commencement of the new 4-year undergraduate programme after 2012. ● With the senior secondary school fee level brought back to 18% of recurrent cost and with the proposed university tuition fee for the 4-year undergraduate programme, the financial burden placed on the parents in the future will be significantly heavier than now. The pressure on low-income families will be particularly felt. ● In the case where tuition fees must be increased, the increase should be effected in a gradual manner, and more financial support should be provided to students in need, including more scholarships for students and more flexible loan repayment arrangements. ● More resources should be set aside for the new academic structure for schools to prepare for and migrate to the new curriculum, arrange teacher training during the preparation years, facilitate flexible groupings of students for some NSS subjects (such as Liberal Studies), and to provide for more diversified learning for students. 	Para. 12.9 - 12.23

Participation and Communication

Concerns	The Way Forward
<ul style="list-style-type: none"> ● There should be more collaboration with the business sector to provide students studying COS with more practical training opportunities and to support student learning experiences outside schools. ● Parent education could be further strengthened to help the reform. 	Para. 13.8 – 13.19

Concerns	The Way Forward
<ul style="list-style-type: none"> ● Apart from parents, the community including business or industrial sectors should also share the funding for implementing the reform measures. ● The Government should encourage more investment/ sponsorship of university researches and other learning activities in schools. 	

Critical Milestones and Coherence-making

Concerns	The Way Forward
<ul style="list-style-type: none"> ● Doubt whether a 4-year preparation period is long enough. ● Concern as to whether teachers have enough preparation time to implement the new curriculum. ● Diverse views on the year of implementation (from 2009, 2010, 2011 to 2012) from those who do not support 2008. ● More preparation time is deemed necessary for the professional development of teachers and writing of textbooks. ● Implementation time should be flexible depending on the availability of adequate resources. ● The reform measures should be implemented in stages. 	Para. 13.34 – 13.46

Summary of EMB Survey Findings

Background

To facilitate the planning and smooth implementation of the new academic structure, EMB conducted a survey among 476 secondary schools in October 2004. In parallel to the dissemination of the Main Document, two sets of questionnaires were sent to these 476 schools, one set for the Principals/Vice-Principals on the proposed academic structure and curriculum design and the other set for teachers on the proposed subject frameworks.

Return rates

A. Questionnaire for Principals/Vice-Principals

471 out of 476 (98.9%) schools completed and returned the questionnaires.

B. Questionnaires for Teachers on Proposed Core and Elective Subject Frameworks

A return rate of over 94% was attained for all subjects.

Survey findings

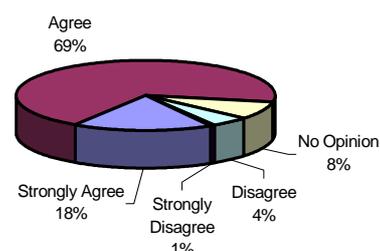
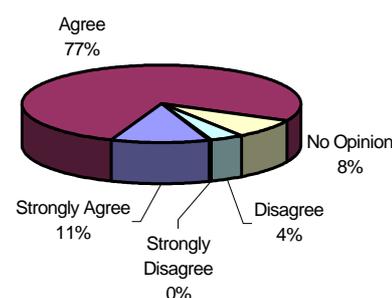
Part A. Questionnaire for Principals/Vice-Principals

Question

Benefits and Different Pathways

1. *Do the changes to the structure of secondary school, the widening of the curriculum and smoother articulation to different pathways address the educational needs of a modern society (p.3-4)?*
2. *Do you agree that the achievements, qualifications and other learning experiences of a student throughout the years of senior secondary schooling should be recognised by means of a student learning profile (p.26-27)?*

Responses

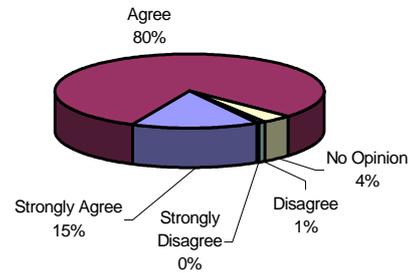


Question

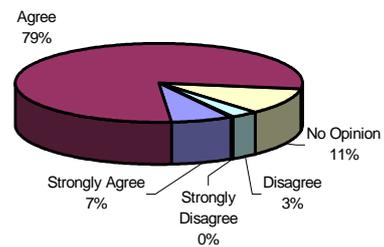
Responses

Curriculum Framework

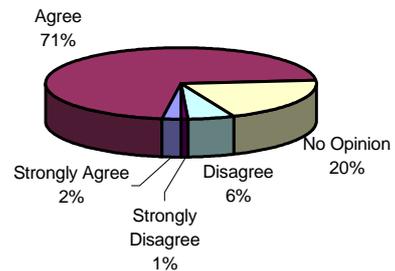
3. *Do you agree to the goals of the reformed senior secondary curriculum (p.8)?*



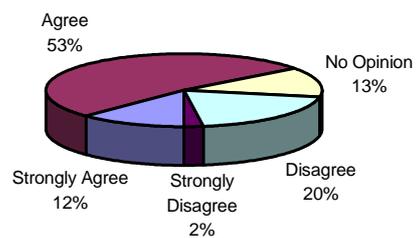
4. *Do you agree that the guiding principles (p.9-10) will meet the goals of the new senior secondary curriculum?*



5. *Do you agree that the proposed student programme (p.10-17) can help achieve the goals of the new senior secondary curriculum?*



(a) *Do you agree that Chinese Language, English Language, Mathematics and Liberal Studies should be the core subjects?*



Question

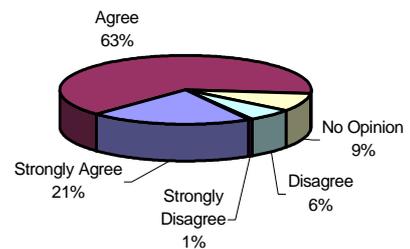
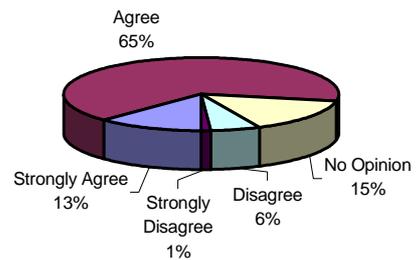
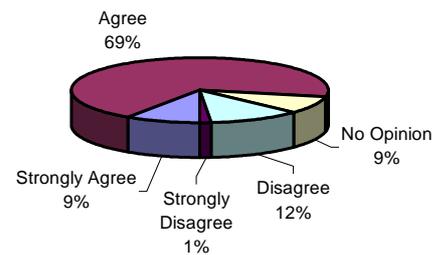
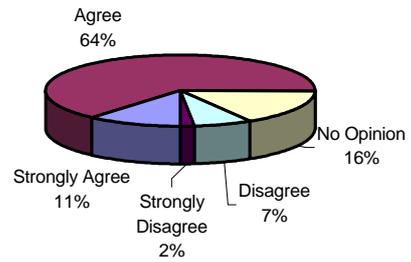
(b) *Do you agree that Liberal Studies can help students develop their independent learning capability with broad-based knowledge and multiple perspectives?*

(c) *Do you agree that students should take 2 or 3 elective subjects?*

(d) *Do you agree that career-oriented studies could be provided as an alternative to the elective subjects?*

(e) *Do you agree that other learning experiences (moral and civic education, community service, aesthetic and physical activities and career-related experiences) should be included as a component of the curriculum?*

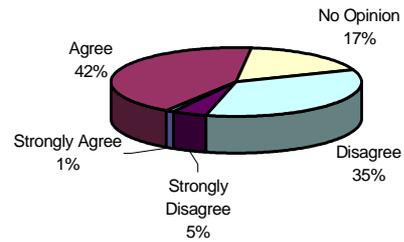
Responses



Question

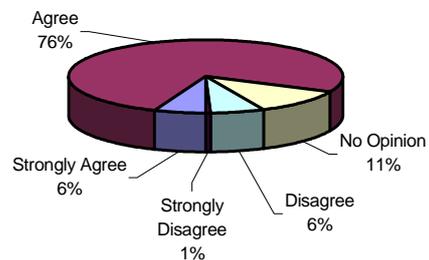
- (f) *Do you agree to the proposed time allocation devoted to the core subjects, elective subjects and other learning experiences?*

Responses

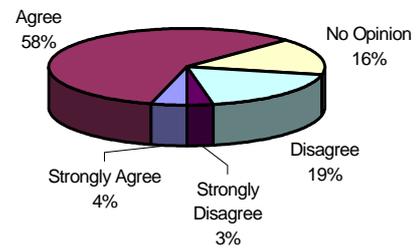


Assessment

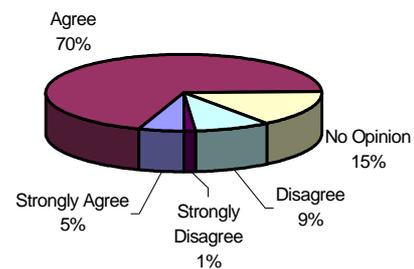
6. *Do you agree to the guiding principles for reforming assessment (p.21-22)?*



7. (a) *Do you agree that School-based Assessment (p. 22-24) could help motivate learning and reduce the pressure of one-off examination?*



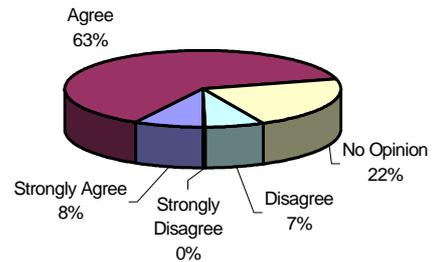
- (b) *Do you agree that School-based Assessment (p. 22-24) could involve teachers' professional judgment on student performance in some competencies not assessed satisfactorily in the public examination?*



Question

8. Do you agree that “standards-referenced” reporting can provide information about what students know and can do, and hence could improve student learning?

Responses



Supporting Measures

9. What supporting measures would be needed other than those mentioned in Chapter 5 of the Main Document?

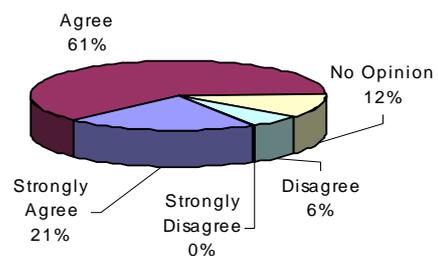
Commonly raised suggestions on supporting measures:

- Class size at senior secondary level should be reduced.
- A smaller class size or split class teaching for Liberal Studies.
- Adequate and timely professional development should be provided to teachers, especially in Liberal Studies and Career-oriented Studies.
- Additional clerical support for increased workload e.g. School-based Assessment and student learning profile.
- Additional resources should be provided to schools to prepare for the curriculum change.
- Supply teachers should be provided to facilitate regular teachers to attend training courses.
- Adopt natural wastage for solving the problem of surplus teachers.
- Support the implementation of SBA by stages on a subject-by-subject basis and should ensure sufficient preparation time before adopting SBA.
- Provide subsidy to students participating extra-curricular activities.

Question

10. (a) Do you agree that universities should use broader admission criteria, e.g. components in student learning profile (p.27)?

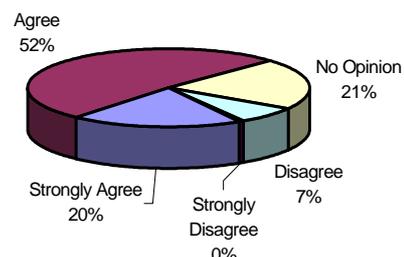
Responses



Question

(b) Do you agree that universities should admit students by faculty rather than by specific departments (p.27)?

Responses



Subjects Offered

11. Schools were asked which subjects they would offer in the new senior secondary curriculum.

Subject	Number of school would offer the subjects	Number of teachers would teach the subjects	Number of teachers requiring professional development
Chinese Language	471 (100%)	3305	1315
English Language	471 (100%)	3519	1422
Mathematics	471 (100%)	2972	1181
Liberal Studies	471 (100%)	3712	3594
Chinese Literature	241 (51.2%)	537	189
Literature in English	27 (5.7%)	68	29
Chinese History	411 (87.3%)	936	327
Economics	422 (89.6%)	887	307
Ethics and Religious Studies	97 (20.6%)	236	75
Geography	410 (87.0%)	795	277
History	337 (71.5%)	624	223
Tourism and Hospitality Studies	156 (33.1%)	278	183
Biology	427 (90.7%)	815	283
Chemistry	428 (90.9%)	822	286
Physics	435 (92.4%)	888	310
Science	130 (27.6%)	346	167
Business, Accounting and Financial Studies	357 (75.8%)	676	347
Design and Applied Technology	87 (18.5%)	223	115
Health Management and Social Care	51 (10.8%)	83	71
Home Economics	52 (11.0%)	94	54
Information and Communication Technology	422 (89.6%)	1029	457
Music	68 (14.4%)	108	50
Visual Arts	332 (70.5%)	517	211
Physical Education	139 (29.5%)	307	102

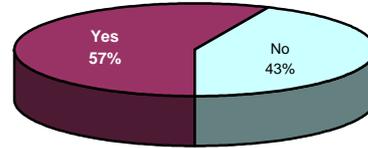
Note: The average number of subjects offered per school including the four core subjects is 15.

Question

Responses

Career-oriented Studies

12. *Would you consider including Career-oriented Studies (p. 16) in the school curriculum to cater for students’ diversified interests, needs and aptitudes?*



13. *Which of the following area(s) of Career-oriented Studies (p.16) do you consider as useful for your students? (Multiple responses are acceptable)*

Areas of Career-oriented Studies	Schools considered as useful to students
Business (e.g. Logistics Fundamentals)	66.5%
Arts and Media (e.g. Multimedia Game Design)	59.9%
Design (e.g. Fundamental Fashion and Image Design)	59.2%
Engineering (e.g. Fundamental Vehicle Servicing)	12.8%
Information Technology (e.g. Computer Networking)	82.1%
Food Production and Management (e.g. Fundamental Western Food Preparation)	35.4%
Services (e.g. Beauty Therapy)	46.7%
Leisure, Tourism and Hospitality (e.g. Introduction to Leisure and Tourism Studies)	67.7%
Performing Arts (e.g. Make-up and Body Painting)	36.2%

Professional Development Programmes

14. *Regarding the time for arrangement of professional development programmes for teachers, please indicate your preference(s): (Multiple responses are acceptable).*

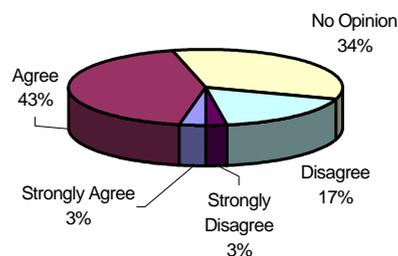
Preference of time	School
During school hours	29.6%
Weekends	72.3%
After school hours on weekdays	36.2%
School holidays	53.6%
No preference	8.3%

Question

Responses

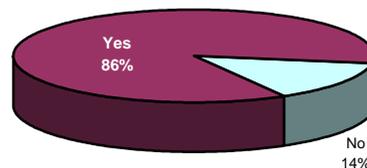
Funding

15. *Do you agree to the shared funding model (p.40-41)?*



Curriculum Planning and Strategies

16. *Have you started planning/preparing for the New Senior Secondary Curriculum?*



17. *Which of the following(s) have you attempted in your preparation for the New Senior Secondary Curriculum? (Please choose one or more options as appropriate)*

Strategies attempted by schools to prepare for the New Senior Secondary Curriculum

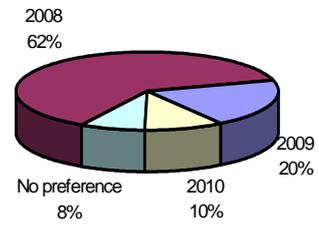
Strategies	Schools attempted
(a) Continue to carry out curriculum and assessment reform at junior secondary level to pave the way for the change (e.g. strengthening learning to learn skills).	79.4%
(b) Start offering the following subjects(s) to students to prepare for the New Senior Secondary Liberal Studies:	
◆ AS-level Liberal Studies	21.0%
◆ S4&5 Integrated Humanities	11.3%
◆ S4&5 Science and Technology	7.0%
(c) Identify curriculum leaders to prepare for the New Senior Secondary Curriculum.	76.4%
(d) Help panels and teachers develop their own professional plans according to the future needs of the school and students.	71.8%
(e) Plan ahead the subjects to be offered according to the needs, interests and abilities of students, and encourage and deploy suitable staff to teach them.	72.2%
(f) Communicate with parents, students and teachers regularly on the change.	61.8%
(g) Join the networks of principals/vice principals.	41.0%

Question

Responses

Implementation Time

18 *Having regard to the situation in your school, are you ready to implement the New Senior Secondary Curriculum at Senior Secondary 1 in the academic year 2008-09?*



Part B. Questionnaires for Teachers on Proposed Core and Elective Subject Frameworks

Opinions on curriculum and assessment design of the proposed subjects

Proposed Subject	Rationale (%)	Curriculum aims (%)	Curriculum Framework		Direction of public assessment (%)
			Compulsory Part (%)	Elective Part (%)	
Chinese Language	95.9	96.9	86.3	56.0	54.0
English Language	96.1	95.6	84.5	58.9	53.8
Mathematics	94.6	94.6	88.0	74.1	43.4
Liberal Studies	92.0	90.5	82.8 – 88.4		81.8
Chinese Literature	95.7	94.1	85.8	67.2	60.5
Literature in English	100	100	93.4		80.0
Chinese History	94.7	94.7	72.4		62.0
Economics	95.8	96.7	85.8		54.8
Ethics and Religious Studies	96.0	98.0	83.7	86.8	56.1
Geography	96.1	95.9	79.3	56.4	51.0
History	94.7	95.5	81.0	64.0	61.3
Tourism and Hospitality Studies	98.6	97.9	86.4	72.1	57.1
Biology	95.5	95.8	86.1	68.7	56.0
Chemistry	94.0	93.9	83.4	68.2	59.1
Physics	94.7	93.6	86.9	65.7	55.3
Science	92.7	93.4	82.5		61.3
Business, Accounting and Financial Studies	75.5	73.8	59.7	47.9	40.0
Design and Applied Technology	87.3	92.0	81.6	73.5	71.3
Health Management and Social Care	98.0	98.0	84.0	72.0	60.0
Home Economics*	88.7	88.7	69.8 / 69.8	56.7 / 75.5	62.3
Information and Communication Technology	97.0	96.2	87.4	76.0	60.5
Music	88.8	88.8	88.8	81.7	56.3
Visual Arts	91.2	91.9	65.4		36.2
Physical Education	94.6	95.3	79.0		49.3

Note: The above percentage shows the responses of strongly agree and agree.

* The first set of figures refers to Framework 1 and the second set refers to Framework 2.

Proposed New Senior Secondary Subjects

Key Learning Areas	Subjects
Chinese Language Education	<ul style="list-style-type: none"> ✧ <i>Chinese Language (Core subject)</i> ✧ Chinese Literature
English Language Education	<ul style="list-style-type: none"> ✧ <i>English Language (Core subject)</i> ✧ Literature in English
Mathematics Education	✧ <i>Mathematics (Core subject + two extensions)</i>
	✧ <i>Liberal Studies (Core subject)</i>
Personal, Social and Humanities Education	<ul style="list-style-type: none"> ✧ Chinese History ✧ Economics ✧ Ethics and Religious Studies ✧ Geography ✧ History ✧ Tourism and Hospitality Studies
Science Education	<ul style="list-style-type: none"> ✧ Biology ✧ Chemistry ✧ Physics ✧ Science
Technology Education	<ul style="list-style-type: none"> ✧ Business, Accounting and Financial Studies ✧ Design and Applied Technology ✧ Health Management and Social Care ✧ Home Economics ✧ Information and Communication Technology
Arts Education	<ul style="list-style-type: none"> ✧ Music ✧ Visual Arts # Performing Arts (to be developed)
Physical Education	✧ Physical Education

**Comparison of Number of School Days at Senior Secondary Levels
across Different Countries**

(Based on information provided at the INCA© Website <http://www.inca.org.uk>
and other sources as at May 2003)

Place	Average no. of school days (excluding festivities / holidays) in a school year at senior secondary levels
Australia	200
Canada	190
England	190
France	180
Germany	198
Hong Kong	154
Hungary	185
Italy	200
Japan	225
Korea	220
Mainland China	200
Netherlands	200
New Zealand	190
Singapore	200
Spain	175
Switzerland	190
Taiwan	200
USA	180

School-based Assessment in HKCEE and HKALE Subjects

	Subjects	Year Implemented	Weighting
<i>HKALE</i>	A Chemistry	1978	20%
	A Government and Public Affairs	1988	22.5%
	AS Chemistry	1994	20%
	AS Chinese Language and Culture	1994	10%
	AS Design and Technology	1994	33⅓%
	AS Liberal Studies	1994	20%
	A Biology	1995	20%
	AS Electronics	1999	20%
	AS Computer Applications	2000	30%
	A/AS Art	2004	25%
	A Engineering Sciences	2004	15%
	A/AS Physics	2004	15%
	A Chinese Literature	2005	25%
<i>HKCEE</i>	Design and Technology	1980	33⅓%
	Electronics and Electricity	1980	35%
	Design and Technology (Alt. Syl.)	2002	30%
	Graphical Communication	2002	30%
	Information Technology	2002	30%
	Technological Studies	2002	30%
	Ceramics	2004	35%
	Computer and Information Technology	2005	20%
	Integrated Humanities	2005	20%
	Science and Technology	2005	20%
	Visual Arts	2005	30%
	Chinese History	2006	20%
	History	2006	20%
	Chinese Language	2007	20%
English Language	2007	15%	

Glossary

<u>Term</u>	<u>Description</u>
Biliterate	Capable of reading and writing effectively in Standard Written Chinese and English
Career-Oriented Curriculum (COC)	The COC courses being piloted are initial examples of COS (see Career-oriented Studies below). The findings from the evaluation of these courses will inform the future shape of Career-oriented Studies in the senior secondary curriculum.
Career-oriented Studies (COS)	They provide courses alongside other school subjects and learning experiences in the senior secondary curriculum. With COS, students are provided with opportunities to explore their career aspirations in specific areas, and to prepare themselves for life-long learning.
Core subjects	Chinese Language, English Language, Mathematics and Liberal Studies
Curriculum and Assessment (C&A) Guide	A guide prepared by the CDC-HKEAA Committee. It embraces curriculum aims/ objectives/contents and learning outcomes, and assessment guidelines.
Elective subjects	A total of 20 subjects in the proposed new system from which students may choose (see Appendix 3).
Key Learning Area (KLA)	The major domains of knowledge used to structure the school curriculum. The Hong Kong curriculum has eight KLAs, namely, Chinese Language Education, English Language Education, Mathematics Education, Personal, Social and Humanities Education, Science Education, Technology Education, Arts Education and Physical Education. Every student should have a learning programme covering all the KLAs.
New senior secondary academic system	The new 3 years of study SS1, SS2 and SS3 that build on the 3-year junior secondary curriculum is equivalent to the current S4-6.

<u>Term</u>	<u>Description</u>
One Committee	A One Committee is referring to the CDC-HKEAA Committee which is a special integrated group set up to work on a public examination subject on a needs basis to carry out tasks designated by CDC and HKEAA.
Other learning experiences	These experiences include moral and civic education, community service, career-related experiences (e.g. such as job attachment), and physical and aesthetic activities.
Project Yi Jin	Project Yi Jin is a special programme for S5 leavers or youths aged 21 or over, to help them obtain a qualification equivalent to 5 passes in HKCEE.
Qualifications Framework	The Qualifications Framework is a seven-level hierarchy of qualifications. It is designed to cover all sectors of education to facilitate the interface between academic and vocational areas. Each level is characterised by generic level descriptors of the common features of qualifications at that level. Qualifications encompassed in the framework are outcome-based. The outcome standard of qualifications is mainly the knowledge and skills in the academic sector. The outcome standard of qualifications in the vocational sector is in the form of competencies set by the industry.
School-based Assessment (SBA)	Assessments administered by teachers in schools which complement and/or supplement the knowledge/skills/attitudes tested in public examinations.
Senior Secondary Student Learning Profile	A record of the overall achievements of students throughout the 3 years of senior secondary schooling.
Standards	Descriptors and exemplars used to describe what students have to know and are able to do to merit the award of a particular level or grade. There is a progressive scale of standards, from a low performance to the highest level of performance.
Standards-referenced assessment (SRA)	Student performance is matched against a pre-set standard, which sets out what the student has to achieve. SRA provides information to students, parents and educational institutions about what the students needs to do to achieve the highest standards.

<u>Term</u>	<u>Description</u>
Teacher-to-class ratio	A number used to calculate the staffing establishment of each school. It represents the number of teachers assigned for teaching one class. In the current academic system, the ratio is 1.3:1 for S4 and S5, and 2:1 for S6 and S7.
Trilingual	An ability to use Cantonese, Putonghua and Spoken English effectively
Yi Jin/Secondary Schools Collaboration Project	It is a pilot scheme aiming to help students who need alternative education pathways. Students enrolled in the pilot scheme are not required to attend HKCEE, but will proceed for further study via the Pre-Associate Degree route, instead of the traditional S6/7 study.

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The bibliography has listed only the major documents consulted while preparing for the Report; they are by no means exhaustive. Many other local and international government and non-government publications, academic books and journals are also used during the preparation process.

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Harvard Educational Review

Journal of Curriculum Studies

Journal of Teacher Education

Journal of Vocational Educational Training

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Review of Educational Research

School Leadership and Management

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The Journal of Moral Education (UK)

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