

Task Force on Review of School Curriculum

Consultation Document

June 2019

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Executive Summary

This Consultation Document sets out the purpose and background, positioning and rationale, as well as initial recommendations of the Task Force on Review of School Curriculum (“Task Force”) and invites views from the public. The consultation period would last for two months.

2. The Task Force was set up in November 2017 to holistically review the primary and secondary curricula. Particularly, it examines how to enhance students’ capacity to learn and nurture in them the values and qualities desired for students of the 21st century; how to better cater for students’ diverse abilities, interests, needs and aspirations; how to optimise the curriculum in creating space and opportunities for students’ whole-person development; and how to better articulate learning at the primary and secondary levels.

3. In the course of the review, the Task Force has examined the current situation in Hong Kong in the wider context of regional and global developments. In exploring and deliberating on the possible suggestions, the Task Force has continuously and actively engaged and collected the views from key stakeholder groups and veterans in the education field.

4. After more than a year of in-depth discussion and taking into consideration the views and feedback collected during a series of engagement sessions as well as the opinions expressed through the media and other sources, the Task Force has formulated a set of initial recommendations for public consultation.

5. Set out below is a summary of initial recommendations which can be broadly categorised under six directions. Further details about each recommendation could be found in Chapter 3 of the Consultation Document.

I. Whole-person Development

Reinforce the importance of whole-person development and create space for students’ balanced development

- There is a need for the Education Bureau (EDB) and schools to enhance curriculum planning at the system and school levels respectively to create space for a wider range of learning experiences to foster students’ balanced development of attributes in the moral, intellectual, physical, social and aesthetic domains, such as physical fitness, psychological and emotional well-being, and the capacity to appreciate the arts and creativity.

II. Values Education

Accord higher priority to values education in schools, strengthen life education in particular, and start life planning education (LPE) early at the upper primary and junior secondary levels

- Values education should be accorded high priority and continuously reviewed to keep pace with rapid societal changes to address new issues in the digital era. Life education, among other facets of values education, should be strengthened to help students develop greater resilience, a sense of responsibility and ethical values.
- LPE could be implemented early in schools.

III. Creating Space and Catering for Learner Diversity

Cater for students' diverse interests, abilities and career aspirations through curriculum and assessment differentiation at the senior secondary level in our school system, as well as provide guidance for students to pursue multiple pathways of their choice

- It is proposed to keep intact the status of the four core subjects in the senior secondary curriculum.
- The design of the curricula and assessments of the four core subjects at the senior secondary level as well as their implementation have to be reviewed so as to allow more flexibility and create space to cater for learner diversity:
 - **Mathematics:** It is necessary to state clearly to the school sector that a good mastery of the concepts and skills in the **Foundation Topics of the Compulsory Part** of the curriculum would be sufficient for students to score as high as Level 4 in the Hong Kong Diploma of Secondary Education (HKDSE) Examination.
 - **Liberal Studies (LS):** The curriculum coverage needs to be clarified and streamlined with a clear delineation of important concepts and content requirements of the subject. It is suggested that schools/students be allowed to opt out of the Independent Enquiry Study (IES) and for that, the assessment in the public examination (i.e. attempting the examination papers only) alone can offer the highest attainment of Level 4 in the HKDSE Examination.
 - **Chinese Language and English Language:** There is a need for trimming the number of examination papers and/or

streamlining the School-based Assessment (SBA).

- There is a need to strengthen **the learning of Chinese literature and classics** in the curriculum, progressively from the primary to the senior secondary level. Yet, the learning needs of non-Chinese speaking (NCS) students of diverse cultural backgrounds in respect of the literature and classics components of the curriculum will need to be considered.

IV. Applied Learning

Further promote Applied Learning (ApL) as a valued senior secondary elective subject

- The value of ApL in the senior secondary curriculum should be reinforced and the EDB should help parents and the school sector understand its importance from the perspective of vocational and professional education and training (VPET), and in catering for learner diversity and providing different exposure to all students for broadening their horizons.
- It is proposed to increase students' incentive to take ApL as an elective subject to dovetail with VPET as a means of catering for learner diversity and supporting students in multiple pathways and to enrich the learning experiences of the more academically-inclined students.

V. University Admissions

Enhance the flexibility of university admissions for cultivating students with different talents

- It is proposed to maintain the General Entrance Requirements (GER)¹ of 3322 in the core subjects as the basic requirement for university admissions in principle.
- Universities are encouraged to exercise greater flexibility under the existing mechanism in admitting students who demonstrate talents and competencies through other means despite not fully meeting the GER.
- Without changing the existing School Principal's Nominations (SPN) scheme, **a new SPN 2.0 Direct Admission Scheme is**

1 **General Entrance Requirements (GER)** of undergraduate programmes under the New Academic Structure: A minimum of Level 3 for Chinese Language and English Language, and Level 2 for Mathematics and LS (i.e. "3322"), plus requirements for one or two elective subjects in the HKDSE Examination.

proposed. Each local secondary school would have an additional quota of two nominations for the school principal to nominate students with talents and achievements in non-academic realms for **designated programmes** proposed by universities.

VI. STEM Education

Strengthen STEM education in primary and secondary schools so as to develop students' capacity to apply knowledge and skills acquired in different STEM-related subjects in an integrated and creative manner to solve daily problems

- The EDB should more clearly define STEM education, and clarify the expectations in primary and secondary schools.
- Against a backdrop of there being diversity of entry points and stages of progress in the promotion of STEM education in different schools, the EDB should address the different needs of schools by stepping up territory-wide support for STEM education.
- A designated committee with representatives from schools, the EDB, universities, professional bodies and private sector should be set up under the Curriculum Development Council (CDC) to oversee the long-term development of STEM education in Hong Kong, including its interface at the primary and secondary levels.

6. Fostering students' whole-person development remains our overarching aim with a view to preparing them for the volatile, uncertain, complex, and ambiguous (VUCA) world of the 21st century. The initial recommendations are intertwining with an explicit goal to create space for students and to cater for their diversity. In the course of collecting views, different stakeholders were positive about the initial recommendations proposed by the Task Force in general but held more divergent views on some items, in particular:

- whether the **IES** of LS should be offered as an option or abolished altogether to generate more space for student learning; or whether a more fundamental change to the subject is required;
- whether the new **SPN 2.0 Direct Admission Scheme** is worth trying via the non-JUPAS route; and
- whether the early implementation of **LPE** at the primary level is necessary and appropriate; and if so, what could be done.

7. Public opinions are most welcome on all initial recommendations listed under paragraph 5 above. Please note that the present review is not targeted at the curriculum content of individual subjects. Detailed comments on individual

subjects would be relayed to the CDC for consideration at a later stage. Comments and views on the Task Force's initial recommendations are welcome and can be sent to the Task Force Secretariat **on or before 16 September 2019 (Monday)**.

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8. Based on the views and feedback collected, the Task Force will consolidate the final directional recommendations and submit them to the Government by the end of 2019. If accepted by the Government, the directional recommendations will be put forth to the relevant bodies under the existing mechanism, including the CDC, the Hong Kong Examinations and Assessment Authority (HKEAA), etc., for follow-up.

Abbreviations

ApL	Applied Learning
CDC	Curriculum Development Council
EDB	Education Bureau
EC	Education Commission
EU	European Union
FYFD	First-year first-degree
GER	General Entrance Requirements
HKDSE	Hong Kong Diploma of Secondary Education
HKEAA	Hong Kong Examinations and Assessment Authority
HUCOM	Heads of University Committee
JUPAS	Joint University Programme Admissions Scheme
LPE	Life Planning Education
OECD	Organisation for Economic Co-operation and Development
OEA	Other Experiences and Achievements in Competitions/ Activities
OLE	Other Learning Experiences
SLP	Student Learning Profile
SPN	School Principal's Nominations
SSSDP	Study Subsidy Scheme for Designated Professions/Sectors
STEM	Science, Technology, Engineering and Mathematics
UGC	University Grants Committee
UNESCO	United Nations Educational, Scientific and Cultural Organization
VPET	Vocational and Professional Education and Training
VUCA	Volatile, Uncertain, Complex, and Ambiguous

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Chapter 1: Preamble

1.1 The importance of nurturing talents for society and enhancing the quality of education is widely recognised in many places/countries, and Hong Kong is no exception. Over the years, Hong Kong’s education system has nurtured a lot of talents in different fields and driven the development of Hong Kong. The Government has also invested substantially in education and implemented different educational initiatives to enhance the quality of education. Education has taken up the largest share of government recurrent expenditures². The large-scale education reform implemented since 2000 has successfully increased education opportunities for many more students at the senior secondary level and the curriculum reform emphasis on “learning to learn” has enriched students’ learning experiences in many aspects. Though our school education has bred many talented young people for our society and has reaped high recognition in the international arena, the challenge for our school curriculum to keep pace with the development will never subside.

1.2 The world has experienced a lot of changes and challenges during the past two decades, with more to be anticipated. We have often heard the caution that, in the not-too-distant future, many jobs will be replaced by digital automation and new job types that do not exist now will emerge. Besides, there have been continual and robust developments in our country and our neighbouring regions (e.g. The Guangdong-Hong Kong-Macao Greater Bay Area, Guangzhou-Shenzhen-Hong Kong Express Rail Link) as well as a growing trend of globalisation across the world in economic, cultural, technological aspects. These are having a profound impact on Hong Kong. To better equip our students for their future, the curriculum needs to undergo review on a regular basis for enhancing student learning. The current review undertaken by the Task Force on Review of School Curriculum (“Task Force”) is part of this ongoing curriculum renewal process.

1.3 With regard to the concerns in society about the implementation of the curriculum, the current review is timely in providing room as well as a platform for stakeholders to discuss and make suggestions for further improvements.

1.4 To advance the quality of our education, the Chief Executive (CE) announced in her 2017 Policy Address that reviews led by educational professionals in eight key domains of the education system would be conducted in order that Hong Kong’s education could significantly move forward in big strides. The Task Force was formed in this context by the Education Bureau (EDB) in November 2017. It is chaired by Dr Anissa CHAN WONG Lai-kuen

² In the 2018-19 financial year, the Government spent 20.4% of its total expenditure on education, which was the largest recurrent expenditure item among all policy areas.

and the membership composition includes veteran educators, experts and professionals in different fields (see **Annex A** for the Membership List).

1.5 The work of the Task Force is to holistically review the primary and secondary curricula with the aim of taking forward developments of the school curriculum in a way that will be conducive to helping students realise their potential for making contributions to our society, the nation, as well as the world at large. To achieve this overarching goal, the Task Force will make directional recommendations to the Government on how the development of the primary and secondary curricula can be rigorous and forward-looking to enhance students' capacity to learn and nurture in them the values and qualities essential for meeting future challenges as well as the needs of society in the 21st century and beyond (see **Annex B** for the Main Scope of Work of the Task Force).

1.6 Given the complexity of the issues surrounding the school curriculum and the wide range of stakeholders involved, the Task Force has set up four Sub-groups, viz. Whole-person Development, Catering for Learner Diversity, Multiple Pathways, and STEM Education, to deliberate on each of the respective areas in an in-depth manner (see **Annex C** for the membership of the four Sub-groups). Concurrently, the Task Force extensively engaged key stakeholders and actively listened to their views and suggestions. Over the past months, the Task Force and its Sub-groups have invited experts, academics, EDB officers, frontline educators and teachers to attend its meetings. It has also met with key education stakeholders including primary and secondary schools councils, the Education Commission (EC), CDC, HKEAA, representatives from the admissions offices of University Grants Committee (UGC)-funded universities and self-financing post-secondary institutions, teachers' unions, employers, students, parents, chairpersons of subject committees and associations, as well as prominent education practitioners in different areas, etc. to ensure that their concerns and proposals are thoroughly considered in formulating the recommendations have taken into account their concerns and proposals.

1.7 This Consultation Document embodies the results of the deliberation and engagement work of the Task Force over the past 18 months. The views collected in this public consultation period would provide important reference for the Task Force to finalise its directional recommendations in a final report to be submitted to the Government by the end of 2019. Upon the endorsement of the report, the recommendations would be followed up under the existing mechanism, particularly by the relevant statutory and advisory bodies, such as the CDC and the HKEAA.

Chapter 2: Curriculum Review: Positioning and Rationale

Ongoing Curriculum Review or Another Reform in Hong Kong?

2.1 The concept of school curriculum refers to the totality of students' learning experiences. It goes beyond the learning of mere subjects or Key Learning Areas to include also the wide array of learning experiences provided for students at different stages of education.

2.2 The “Education Blueprint for the 21st Century” set out by the EC in 2000 to offer all-round and balanced learning opportunities and to lay the foundation for lifelong learning has remained the bedrock of the primary and secondary curricula up to the present. The updating of the primary and secondary education curriculum guides in 2014 and 2017 respectively, in which the overall aims of whole-person development³, lifelong learning for all students and self-directed learning have been reinforced, was built on the same premises. Thus, the current review undertaken by the Task Force can, in fact, be seen as part of the ongoing curriculum renewal process on the basis of the current curriculum framework, instead of another curriculum reform.

The Global Context

2.3 Like many other areas in the world, Hong Kong has been experiencing unprecedented transformation in its economic and social structures brought about by the rapid pace of globalisation, regional integration, and technological advancement. More and more jobs in the current labour market have been/will be replaced by machines or robots, while the nature of jobs of the future cannot be reliably predicted. Education for academic or professional credentials as a means to secure well-paid jobs is under review pressure. With the increasingly VUCA global and local environments, major international organisations and countries/economies have embarked on exploring how to nurture talents and better equip students with the essential knowledge and attributes for coping with future challenges. How the Hong Kong school curriculum can keep abreast of the demands of the times and adequately help our young people adapt to changes and continue to thrive both locally and internationally is a key concern. Ongoing curriculum renewal will help keep student learning in pace with the changes and maintain the competitiveness of our young people.

³ **Whole-person development** refers to enabling students to have all-round and unique development in the areas of ethics, intellect, physique, social skills and aesthetics according to individual potential.

The 21st Century Competencies Expected of the Young in Future

2.4 The Task Force Secretariat has done a desktop research on the knowledge, skills and attitudes that will enable young people to thrive in the 21st century as identified by different education authorities or international organisations, including the Ministry of Education of our country, the United Nations Educational, Scientific and Cultural Organization (UNESCO), the World Economic Forum (WEF), the Council of the European Union (EU), the Organisation for Economic Co-operation and Development (OECD), etc. Some notable commonalities are found among these education authorities in search of competencies, such as attaching importance to the knowledge and skills related to science, technology and information technology. Apart from these, generic skills such as critical thinking and innovative thinking, communication and collaboration; and values such as citizenship and respect are highly regarded as essential for preparing students to face the 21st century. The UNESCO and the OECD further advocate that the competencies are not mutually exclusive and it is in fact necessary to integrate and mobilise different combinations of knowledge, skills, values and attitudes to tackle the challenges of the future.

2.5 Some notable education systems, such as that of Finland, Singapore and the United States, share the understanding that creativity, inter-personal and collaborative skills, global, civic and cultural awareness in parallel to information technology skills and literacy are competencies and attitudes that are equally essential for young people to thrive in the 21st century. It is worth noting that different countries or economies would make careful adjustments when consolidating their own set of competencies to suit their unique culture, history, value systems, contexts, needs and concerns instead of directly transplanting from other countries what they see as desirable practices or experiences. For instance, the Ministry of Education of our country pays high regards to the cultivation of moral virtues (“立德樹人”).

Our Curriculum Framework

2.6 Reflecting on our existing curriculum framework (**Annex D**), the Task Force agrees that we have been moving in the right direction. Since the curriculum reform in 2001, our school curriculum has been advocating “learning to learn” and developing students’ self-directed and lifelong learning capabilities. Our school curriculum has also been promoting the generic skills and priority values and attitudes that broadly align with many of the 21st century skills and attributes valued by the international community. There are **nine generic skills** in the Hong Kong school curriculum which include: Basic Skills (i.e. Communication Skills, Numeracy/Mathematical Skills, Information Technology Skills), Thinking Skills (i.e. Critical Thinking Skills, Creativity, Problem Solving Skills), and Personal and Social Skills (i.e. Self-management Skills, Study/Self-learning Skills, Collaboration Skills).

2.7 Our existing curriculum also attaches great importance to values education. Among others, there are **seven priority values and attitudes** in the Hong Kong school curriculum, which include the following: Perseverance, Respect for Others, Responsibility, National Identity, Commitment, Integrity, and Care for Others. Apart from advocating a shift in the teaching pedagogy and assignments, students are encouraged to integrate and apply the knowledge and skills from other related subjects, to solve problems and tackle challenges around them. In the course of creative problem solving, schools can help students develop such generic skills, values and attitudes as team collaboration and positive thinking about problems.

Our Strengths

2.8 Hong Kong students have consistently been performing well in major international student assessments, including the Programme for International Student Assessment (PISA)⁴, the Trends in International Mathematics and Science Study (TIMSS)⁵ and Progress in International Reading Literacy Study (PIRLS)⁶ (see **Annex E** for details). The reading literacy, mathematical literacy and scientific literacy of our students rank among the top tier in the international arena.

2.9 Our HKDSE is recognised by more than 280 tertiary institutions worldwide which have indicated their acceptance of students with HKDSE Examination qualification⁷. Among these institutions, many are prestigious ones in Asia, North America and Europe.

2.10 Hong Kong has also been recognised internationally as having one of the best education systems in achieving both high quality and equity in provision, as well as being a successful education reformer. Hong Kong was named in an international research report⁸ as one of the five systems out of 20 that have moved from “Good” to “Great”, whilst embarking towards “Excellent”. In another international report⁹, Hong Kong’s reforms were complimented for their coherence, clear priorities and careful sequencing.

⁴ **PISA** is a three-year international study administered by the Organisation for Economic Co-operation and Development (OECD). It aims to assess the mother tongue reading, mathematical and scientific literacy of 15-year-old students.

⁵ **TIMSS** is organised by the International Association for the Evaluation of Educational Achievement (IEA). It aims to study student achievements in mathematics and science at Grade 4 (P4 in Hong Kong) and Grade 8 (S2 in Hong Kong).

⁶ **PIRLS** is organised by the IEA. It aims to assess the mother tongue reading literacy of students aged 9 to 10 at Grade 4 (P4 in Hong Kong).

⁷ Recognition of Qualifications for Hong Kong Diploma of Secondary Education, http://www.hkeaa.edu.hk/en/recognition/hkdse_recognition/ircountry_hkdse.html.

⁸ Mourshed, M., Chijioko, C., & Barber, M. (2010). *How the World's Most Improved School Systems Keep Getting Better*. McKinsey & Company.

⁹ Barber, M., Donnelly, K., & Rizvi, S. (2012). *Oceans of Innovation: the Atlantic, the Pacific, Global Leadership and the Future of Education*. The Institute for Public Policy Research.

Curriculum Implementation Concerns

2.11 The Task Force is aware of the views of stakeholders that there are some curriculum implementation issues. These issues/concerns are intertwining and impact simultaneously on different education levels and domains. The following is a summary of these concerns.

Whole-person Development

2.12 The balanced development of students in the five aspects of development, viz. moral, intellectual, physical, social and aesthetic, has long been recognised and promoted in our education. However, there have been cases that subject learning has taken up too much of the total lesson time in both primary and secondary schools. Some students have been put under excessive pressure to undertake large amounts of homework, tests, practice exercises and drillings, and to attend supplementary lessons and tuition classes after school and during holidays. All these have consumed students' time, space and energy at the expense of their leisure, interests, play, reading, rest, etc. for whole-person development.

2.13 Advancement of technologies has enabled the Internet and social media to pervade our everyday lives. Huge amount of unverified information being at our fingertips has inevitably brought about problems such as **fake news, polarised opinions, cyberbullying, spread of pornography and digital crime** etc., all of which have profound negative impacts on our youngsters' attitudes, behaviour, values and inter-personal relationship. Hence, many call for greater emphasis and more effective and timely approach to cultivating moral and civic attributes through enhanced moral and civic education.

2.14 Confronted with massive future uncertainties, some students are bewildered at what they want to pursue and some school leavers may become disillusioned because the work environment is becoming more demanding and the prospect more uncertain. They can no longer expect the security of staying in one job until retirement. This requires our young people to have broader vision, be more versatile and resilient in coping with unforeseeable challenges. Thus, it is important for school education to foster qualities such as versatility and resilience.

Learner Diversity

2.15 As students are diverse in their interests, abilities, attributes and aspirations, it has been observed that the existing curriculum and assessment, which is oriented more towards academic advancement, has room for improvement in order to cater for learner diversity.

2.16 There are also keen concerns about the **implementation of the senior secondary curriculum** with the following views:

- There are views that the **curriculum content and assessment** of the

four core subjects (viz. Chinese Language, English Language, Mathematics and Liberal Studies (LS)) are **too heavy**, and the two language subjects and LS are too **language laden** (i.e. Chinese Language, English Language, and LS).

- The four core subjects are also considered as **taking up too much learning space of students, i.e. about 45-55% of their studying time, restricting students from taking more elective subjects and/or participating in Other Learning Experiences (OLE)**, and going against the curriculum goal of providing broad and balanced learning experiences for students. Some even attributed the slow progress in Hong Kong's development in STEM to the over-emphasis on the core subjects, which has allegedly inhibited students from taking more science elective subjects and weakened their exposure to and interest in STEM exploration.
- Some senior secondary students “strategically” study two elective subjects¹⁰ even if they are capable of choosing three elective subjects, believing that spending more time on fewer subjects will bring them better HKDSE Examination results and increase their chance of getting into the university, as admission to the majority of undergraduate programmes requires scores from six subjects only. The result of studying fewer elective subjects, to some extent, **limits students' breadth of knowledge and their choice of study for further study and other pursuits**.
- Some stakeholders consider that the design of the **Chinese Language** curriculum tends to gear towards the functional use of the language¹¹ and the teaching of Chinese culture elements should be further strengthened. As Chinese is the native language of most students, some opine that there is a need to review the value of the listening and speaking parts in the subject's public examination. The time released after streamlining could be spent on learning the subject in greater depth of Chinese literature and culture, or OLE, or other personal or study pursuits.
- While in general the school sector supports the graded approach already adopted in the HKDSE **English Language** Examination to cater for learner diversity, there have been views that the subject could stretch the able students more and assist less able students further, and streamlining could still be done to the curriculum and assessment.
- For **LS**, there are views that the curriculum content and concepts involved are not well delineated and defined. In addition, there are no recommended textbooks for the subject and hence no guarantee of

¹⁰ Of the 2019 school candidates of the HKDSE Examination, about 70% of them have enrolled for just two elective subjects, slightly less than 20% for three or more elective subjects, and about 9% for just one elective subject.

¹¹ Language learning in terms of communication skills in respect of reading, speaking, listening and writing

quality and accuracy of students' learning materials. Some people consider that the subject has become a platform for superficial recount of current affairs without providing a sufficient knowledge base for meaningful discussion to take place. As regards the **Independent Enquiry Study (IES)**¹², the School-based Assessment (SBA) of LS, while some teachers and students lament that the weighting of assessment does not justify the vast amount of time and effort spent, some others regards that it is easy to score marks in IES as compared with the written assessment questions.

- The current **Mathematics (Compulsory Part)** curriculum consists of **Foundation Topics** and **Non-Foundation Topics** (covering a wider range of content). In the HKDSE Examination paper, good performance in the Foundation Topics is in fact sufficient for students to attain up to Level 4 but this message is not explicitly conveyed to schools. Often, schools deliver the whole Compulsory Part to students irrespective of their ability and interest. As for **Mathematics (Extended Part)**¹³, the issue commonly raised is that Module 1 (M1) and Module 2 (M2) are not recognised as a full subject on a par with other elective subjects by some tertiary institutions. Besides, as some schools often put M1/M2 outside the regular school timetable (i.e. lessons are arranged after-school hours and/or during Saturdays), there is less incentive for students to take M1/M2.

Multiple Pathways

2.17 Regardless of personal interests and ability, almost all students in Hong Kong still aim at entering the university and consider “**vocational and professional education and training**” (VPET)¹⁴ as an inferior choice. Students who are unable to get into undergraduate programmes offered by universities often resort to entering associate degree or higher diploma programmes, with the goal of ultimately obtaining degree qualifications. In the same vein, students view

¹² **Independent Enquiry Study (IES)** constitutes 20% of the overall score of the HKDSE LS Examination. Schools are advised to allocate 82 hours or one third of the total lesson time to support students in the conduct of their IES.

¹³ **Mathematics Extended Part** comprises Module 1 (Calculus and Statistics) and Module 2 (Algebra and Calculus).

¹⁴ To follow up on the Report recommendations from the Task Force on Promotion of Vocational Education in 2015, the Government rebranded “vocational education and training” (VET) as “**vocational and professional education and training**” (“VPET”) covering programmes up to degree level with a high percentage of curriculum consisting of specialised contents in vocational skills or professional knowledge. The Government also established the Task Force on Promotion of Vocational and Professional Education and Training in April 2018 to evaluate the implementation progress of the recommendations made in abovementioned Report in 2015; review how VPET can be better promoted in the career and life planning education in secondary schools to cater for students' diverse abilities and interests; and how to foster closer business-school collaboration to meet the manpower needs of Hong Kong. The public consultation conducted by this Task Force has commenced in May 2019 and will end on 12 July 2019.

Applied Learning (ApL)¹⁵ in the senior secondary curriculum as a second rate option, rather than a valued subject to broaden their horizons and complement their studies of other subjects, contrary to the original intention of ApL.

University Admissions

2.18 Some stakeholders view that strict adherence to the **General Entrance Requirements (GER)**¹⁶ of “3322” in the four core subjects for university admission does not adequately cater for learner diversity. Students who score good grades in elective subjects but do not meet the GER are not admitted to undergraduate programmes.

2.19 Furthermore, as students have diverse talents, some considered that students’ achievements and experiences in non-academic and other areas such as sports, arts, leadership, and community services should be adequately recognised. The school sector in general considers that universities **primarily consider the HKDSE Examination results** without giving due recognition to the Student Learning Profile (SLP)¹⁷, and Other Experiences and Achievements in Competitions/Activities (OEA)¹⁸.

2.20 At the school level, the backwash effect is that schools would arrange supplementary classes and tuition groups for students after school and during holidays, leaving little space for students to develop their potentials in other realms, in particular those of a non-academic nature.

2.21 It is also observed that for gifted education or talent development, while some schools may arrange for their high achieving students to participate in enrichment activities and competitions, there is a lack of long-term programmes on systematic talent development of these students.

STEM Education

2.22 The promotion of **STEM education** has been a recent focus of attention.

¹⁵ **Applied Learning (ApL)** courses are elective subjects within the senior secondary curriculum. They offer studies with equal emphasis on practice and theory linked to broad professional and vocational fields. A flexible combination of ApL courses with core subjects, elective subjects and OLE helps provide students with authentic and holistic learning.

¹⁶ **General Entrance Requirements (GER)** of undergraduate programmes under the New Academic Structure: A minimum of Level 3 for Chinese Language and English Language, and Level 2 for Mathematics and LS (i.e. “3322”), plus requirements for one or two elective subjects in the HKDSE Examination.

¹⁷ **Student Learning Profile (SLP)** is a document of good reference value for admission purposes recognised by JUPAS participating institutions and SSSDP institutions. It provides additional information on applicants’ whole-person development encompassing their personal qualities and competencies.

¹⁸ **Other Experiences and Achievements in Competitions/Activities (OEA)** is one of the factors in addition to the achievements at the HKDSE Examination that JUPAS participating institutions and SSSDP institutions will consider.

The advances in technology in the 21st century represent a new era whereby real-life problems are tackled through integrating and applying knowledge from different areas and working across different domains, including but not limiting to science, technology, engineering and mathematics by collaboration of people of different expertise. In view of its importance in equipping students for the 21st century, STEM education becomes one of the development priorities of many primary and secondary schools. However, the pace and implementation strategy of STEM education varies a lot among schools. STEM advocates consider that the Government should step up efforts in promoting STEM education and provide more guidance and support to boost the development of STEM education.

Summing Up

2.23 The Task Force agrees that the issues/concerns above need to be addressed. They are the areas where improvements to the school curriculum are most needed, but notwithstanding the fact that the education sector has gone a long way in achieving the aims of the education and curriculum reforms commenced in 2000. The achievements include, for example, enriching and broadening the learning experiences of our students, extending free education for all students up to Secondary 6, providing students with a well-recognised qualification for further studies and work, enhancing VPET and multiple pathways for students, and providing professional support and resources for schools.

2.24 This is the backdrop against which the Task Force is undertaking this complex and challenging task of curriculum review. The review will not provide detailed solutions to individual issues per se, nor is it another “reform” to make drastic changes. Its primary objective is to provide recommendations on a policy directional level on curriculum enhancement for better preparing our students for the future and addressing curriculum implementation problems with suggestions in a coherent and holistic manner.

Chapter 3: Initial Recommendations

Students' learning and development needs are at the centre of this curriculum review. The Task Force has broadly identified six directions as outlined below for optimising the school curriculum, under which a set of initial recommendations are proposed. Against a backdrop of students' diverse interests, needs and aspirations, the initial recommendations aim at “fostering whole-person development”, “creating space”, “providing choice”, and “meeting future needs and cultivating future-ready attributes”.

Initial Recommendations

Whole-person Development

3.1 Reinforce the importance of whole-person development and create space for students' balanced development

3.1.1 There is a need for the EDB and schools to enhance curriculum planning at the system and school levels respectively to create space for a wider range of learning experiences to foster students' balanced development of attributes in the moral, intellectual, physical, social and aesthetic domains, such as physical fitness, psychological and emotional well-being, and the capacity to appreciate the arts and creativity

- The education sector has long recognised the importance of a balanced development of students in five aspects, viz. moral, intellectual, physical, social and aesthetic, which underpin the curriculum reform. Yet, for different reasons, some genuine and some misconceived, our school education has been criticised as examination-driven and full of pressure. It is high time the EDB worked more closely with schools through different channels including school visits and inspections, on school curriculum planning with all-round development of students being the priority. Territory-wide school leadership workshops, with engagement of school sponsoring bodies, school management personnel could be conducted for consensus and capacity building as well as co-learning and experience sharing.
- Without the pressure of public examination, there is more room for primary schools to **make better use of whole-day schooling**¹⁹ to

¹⁹ **Whole-day primary schooling** aims to offer a favourable learning environment for students. In curriculum planning, the schools could implement a more flexible and balanced curriculum, while covering the core curriculum, to provide students with diversified learning experiences, including

help students explore their interest in a wide range of areas beyond subject learning. Good practices of implementing whole-day primary schooling for whole-person development should be further promoted and disseminated. The school-based homework/assessment policy should also be reviewed in tandem with the aim of **not overloading students and depriving them of time for physical exercise, leisure, rest, play and developing interests**. It is also important to **step up communication with and co-operation from parents**.

- Secondary schools should also review its curriculum planning, especially that for the junior secondary level, and its interface with the primary curriculum, to ensure a balanced coverage of learning experiences without undue use of curriculum time for excessive drilling of students merely for preparation of public examinations. **Adequate space should be created for students to participate in life-wide learning experiences**, develop personal strengths/interests, and explore further study options and career opportunities in the traditional and new economies. Schools are encouraged to make good use of the new recurrent Life-wide Learning Grant²⁰, to be disbursed to schools starting from the 2019/20 school year, to enhance learning beyond the confines of the classroom through organising more experiential learning activities in various curriculum areas for students.

Values Education

3.2 Accord higher priority to values education in schools, strengthen life education in particular, and start life planning education (LPE) early at the upper primary and junior secondary levels

3.2.1 Values education should be accorded higher priority and continuously reviewed to keep pace with rapid societal changes to address new issues in the digital era. Life education, among other facets of values education, should be strengthened to help students develop greater resilience, a sense of responsibility and ethical values

- Inappropriate information and ideas have been pervading our everyday lives and adversely affecting the attitudes and behaviours of our youngsters, it is important to **cultivate in students positive values and qualities essential for meeting future challenges, making use of the existing values education framework**, which

programmes for promoting reading to learn, moral and civic education, national education, religious education, students' physical and aesthetic development, the use of information technology for interactive learning and cross-curricular learning.

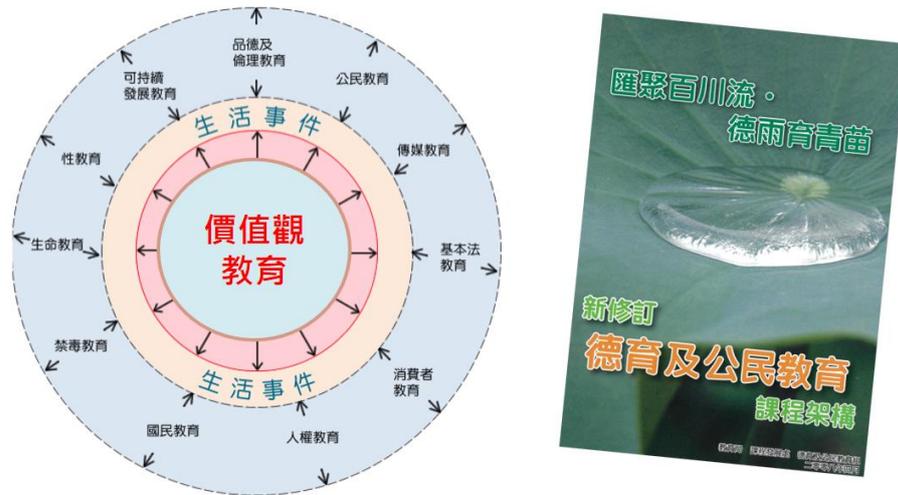
²⁰ Please refer to Education Bureau Circular No. 16/2019: **Life-wide Learning Grant** for details.

embraces moral and civic education, sex education, national education, human rights education, environmental education, Basic Law education, etc.

- Among the different facets of values education, the Task Force sees the need for **strengthening life education and its articulation in primary and secondary schooling with due emphasis on cultivating students’ resilience, ethical use of information technology and responsibility to others, our society and our nation.**
- In the cultivation of positive values, it is incumbent upon school educators to provide **enriched experiential learning beyond classroom learning of academic subjects**, including services in school and the community, to help deepen students’ understanding of, affiliation to and reflection on the world in which they are living and working. Teachers’ role modelling is crucial in values education **to bring about students’ understanding, appreciation and self-reflection of the values and principles behind actions and decisions.**
- All along, the EDB has been advocating a holistic and integrated approach to taking forward different facets/“labels” of values education (e.g. moral and civic education, national education, sex education, environmental education). **School-based planning of values education** is undertaken by schools in consideration of their own vision and mission. As regards implementation, it is common for schools to complement formal classroom teaching with a wide range of OLE, with the engagement of parents, alumni, non-governmental organisations, etc. The above approach has been implemented for many years and is widely accepted by the school sector to address diverse school needs. Without undermining the above approach, the Task Force sees the need for the EDB to **update related guidelines and/or prepare more “life events” exemplars** to illustrate how teachers can make use of the curriculum content of the respective subjects and social/“life events” relevant to students’ experiences to stimulate discussion on controversial issues (e.g. child abuse, teenage pregnancy, gender issues, cybercrime) and help students understand the different value judgments that these issues reveal, so as to cultivate positive values which cut across and permeate various facets of values education.

Figure 1: Existing approach and curriculum document in implementing

values education in schools (Chinese version only)



- There is also a need for the EDB to **provide professional training** to enhance principals' and teachers' understanding of the updated social/"life events" exemplars in teaching and guiding their students to cultivate positive values to meet the new social challenges.

3.2.2 LPE could be implemented early in schools

- LPE, which comprises an understanding of "self", awareness of future opportunities for studies or work in a dynamic society and cultivation of basic work ethics, should also be strengthened. At present, LPE (including career guidance) is mainly promoted at the senior secondary level as students are due to make career and study choices after finishing secondary education. Primary students' exposure to this area is relatively limited. There are clear merits of **starting LPE early in primary and junior secondary schooling** as young students, their parents and schools should develop an understanding and appreciation of students' interests, abilities, needs and aspirations early so that they could make informed decisions in further pursuing their interests, developing their abilities, and better planning for future studies and work. Nonetheless, the Task Force considers that a detailed and concrete career guidance framework is not feasible in view of the rapid changes and developments in society. In this connection, relevant Sections of the **EDB need to clearly spell out the expectations of implementing LPE at the primary and junior secondary levels. Professional training** to enhance principals' and teachers' understanding of and exposure to the workplace needs to be **stepped up**.

Creating Space and Catering for Learner Diversity

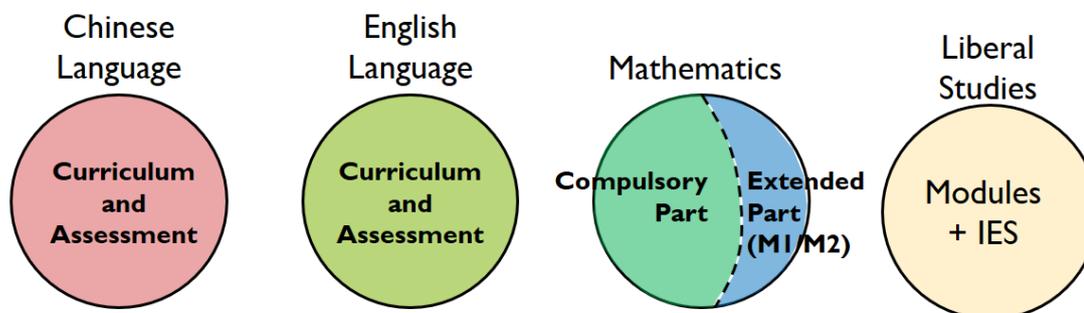
3.3 Cater for students' diverse interests, abilities and career aspirations through curriculum and assessment differentiation at the senior secondary level in our school system, as well as provide guidance for students to pursue multiple pathways of their choice

3.3.1 It is proposed to keep intact the status of the four core subjects in the senior secondary curriculum

- While duly recognising that there is room for improvement after 10 years of implementation, the Task Force considers that the core subjects of Chinese Language, English Language, Mathematics and LS should remain unchanged to enable students to develop language proficiency, numerical literacy, appreciation of Chinese culture and literature, the capacity to look at issues from multiple perspectives and a global mindset.

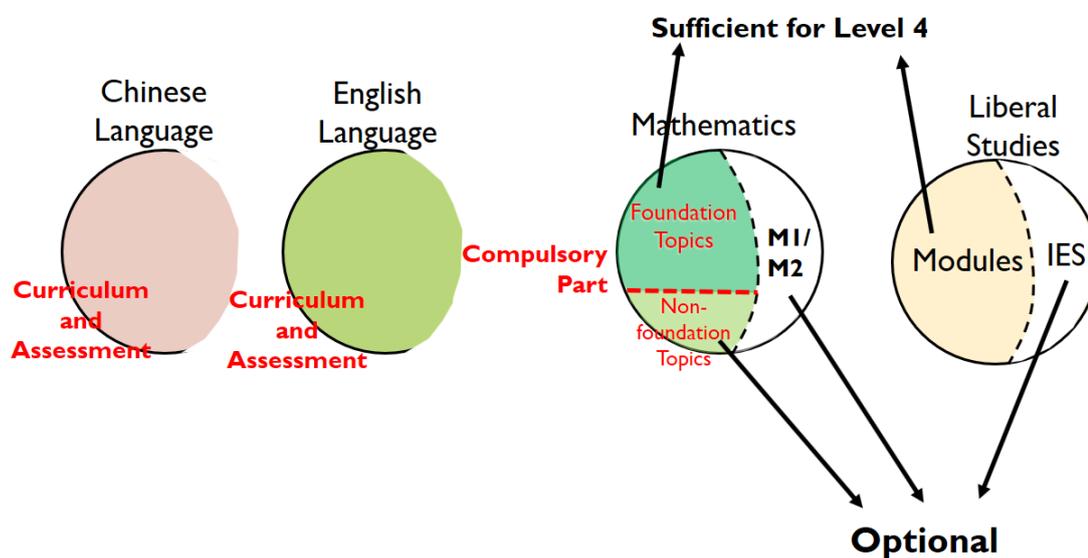
3.3.2 The design of the curricula and assessments of the four core subjects at the senior secondary level as well as their implementation have to be reviewed so as to allow more flexibility and create space to cater for learner diversity

Figure 2: Current framework of the four core subjects at the senior secondary level



- The **curricula and assessments of the four core subjects at the senior secondary level can be trimmed** without jeopardising the curriculum integrity to **release space for ALL students** to learn individual subjects in depth, take more elective subjects if needed, participate in OLE for whole-person development, explore their interests, and develop their life and career goals. The reduction in the content to be covered would also enable a more in-depth and interactive learning approach and allow teachers to teach individual subjects more thoroughly.
- In parallel, the **curricula and assessments of the four core subjects can be “differentiated”** to address learner diversity better.

Figure 3: Possible scenarios of trimming and differentiating the four core subjects at the senior secondary level



- i. The Compulsory Part of the existing curriculum of Mathematics is **demarcated into the Foundation Topics and Non-Foundation Topics**. The Foundation Topics cover the essential learning elements including the basic mathematical concepts and skills for general use in work and adult life. A good mastery of these concepts and skills will be sufficient for students to score as high as Level 4 in the HKDSE Examination. This arrangement could create space for students who have interests in other subjects or endeavours to pursue these in greater depth. The Non-Foundation Topics of the Compulsory Part and the Extended Part cover some more content and/or a higher level of assessment requirements to cater for students who have greater interest or ability in Mathematics. In this connection, it is judicious for students to score beyond Level 4 if they have mastered the concepts and skills beyond the Foundation Topics in the Compulsory Part as their study is heavier and more difficult. In the longer run, whether M1 and M2 could be consolidated into a separate subject of “Advanced Mathematics” warrants further deliberation.
- ii. LS is the one among the four core subjects that has drawn most discussion in the community. The views expressed hitherto span both ends of the spectrum:
 - abolish the subject to create space for taking up more elective subjects;

- instead of placing it as a core subject, place it as an elective subject so that students may decide whether they have the aptitude and aspiration to pursue it;
- simply grade the attainment as “pass” or “fail” to lessen the load on students and to reduce drilling for examination which defeats the objective of the subject;
- draw up a detailed syllabus for the subject with clearer delineation of the content requirements as in other subjects so that there can be better quality assurance on what students learn;
- draw reference to similar curricula of other countries and introduce higher/standard level curricula to cater for learner diversity;
- include more thinking and philosophies in classical works and natural science theories in the subject curriculum to lay a better foundation for the enquiry approach in students;
- reduce the number of modules to reduce the load of students;
- select a few modules as the core part and the other modules plus the IES as the extension part as in other elective subjects to cater for learner diversity and reduce the load of students;
- abolish the IES or make it an option to cater for learner diversity, reduce the load of students and provide space for more professional guidance from teachers;
- do not set any compulsory question in the public examination so that candidates would have a choice over the questions they answer according to their attributes, abilities, and understanding of and interest in the issues; and
- maintain the status quo as students have benefitted from the subject and students and teachers would find it difficult to adapt to frequent changes.

In line with the important aims of creating space and catering for learner diversity, the Task Force’s views are that the curriculum coverage of LS needs to be clarified and streamlined with a clear delineation of important concepts and content requirements of the subject so that the scope of learning and teaching is manageable. Students’ knowledge acquisition forms the basis for the enquiry approach of the

subject²¹. The implementation of the IES is said to be out of proportion in terms of time and assessment, not to mention the divergent views on the quality of student output across different schools.

In order to create space for learning and teaching and cater for learner diversity, the Task Force suggests that schools/students be allowed to opt out of the IES and that the assessment in the public examination (i.e. attempting the examination papers only) alone can offer the highest attainment of Level 4. This arrangement is deemed to be appropriate as there should be a difference in attainment levels between those studying/doing less and those more. Moreover, attainment of Level 4 is sufficient for meeting the entrance requirement of the vast majority of the first-year first-degree (FYFD) programmes of higher institutions. As the IES takes up at least one-third of the total lesson time and workload for LS, the opt-out would notably free up this amount of space for use in many ways, including enabling teachers to teach and students to learn the subject's modules more thoroughly. The Task Force understands that the existing assessment mode may need to be reviewed or adjusted. Close collaboration between the EDB and HKEAA is necessary.

- iii. As regards Chinese Language and English Language, there is a need for **streamlining the number of examination papers and/or SBA to suit the needs of students**. However, the approach to cater for learner diversity undertaken by these two subjects should differ. For English Language, in addition to the existing practice of providing an easier section and a more difficult section to cater for learner diversity, how the Elective Part is assessed, and whether the SBA can be trimmed and the design of the examination paper(s) modified can be further explored. As for Chinese Language, whether the listening and/or speaking parts of the public examination and the implementation of the SBA can be modified or trimmed to create space can also be explored.
- iv. With a view to strengthening the language foundation of our students and stimulating their learning interest, we see the need to **enhance and cultivate in students early** from the primary level and progressively throughout the secondary level **an appreciation of Chinese literature and classics** which are the

²¹ According to the LS Curriculum and Assessment Guide (Secondary 4 – 6) (2015), the experience of Advanced Supplementary Level (ASL) LS indicates that roughly 50-60% of the enquiry process will be needed for acquiring content knowledge if students are to have a sufficient understanding of the background and nature of the issues explored (page 4). Thus, knowledge acquisition should remain a learning and teaching focus of the subject.

valuable heritage of our time-honoured Chinese culture. There is a need to strengthen the learning of literature and classics in the senior secondary curriculum. In tandem, we have to take measures to cater for the learning needs of non-Chinese speaking (NCS) students of diverse cultural backgrounds and will need to consider whether, and if so, how much of, the literature and classic components of the curriculum they should pursue.

- v. The curricula and assessments of the four core subjects should be under continuous review to better address learner diversity while not compromising the basic competencies that students need to have in life. The extension of these practices in **curriculum and assessment differentiation to other subjects** at the senior secondary level can also be considered in the long run to further release space for students.
- The above ideas on trimming and differentiation help address the concern that senior secondary students are narrow in their scope of study and lack depth in disciplinary knowledge as much time has to be spent on the core subjects. **A lighter curriculum and assessment load for all four core subjects could help release space**, which enables students to participate more in life-wide learning, study more elective subjects, and take up other personal pursuits.
 - There is a prevailing view and common practice that students choose only two elective subjects because they and the general public believe that by concentrating on two elective subjects it is easier to obtain good results in the HKDSE Examination. This view overlooks the need for a breadth of knowledge, a wide range of skills and attributes, and the importance of whole-person development.
 - Thus, the proposed changes have to be taken forward with good communication with **schools, teachers, parents and students**, and their understanding and concerted effort are critical.

Applied Learning

3.4 Further promote Applied Learning (ApL) as a valued senior secondary elective subject

3.4.1 The value of ApL in the senior secondary curriculum should be reinforced and the EDB should help parents and the school sector understand its importance from the perspective of VPET, and in catering for learner diversity and providing different exposure to all students for

broadening their horizons

- The senior secondary curriculum under the New Academic Structure aims to provide students with broad and balanced learning experiences to widen their knowledge base and to enable them to pursue the academic pathway as well as VPET with articulation to a wide range of post-secondary education or to enter the workplace. At present, there are about 40 ApL courses under six areas of studies covering Creative Studies, Media and Communication, Business, Management and Law, Services, Applied Science, and Engineering and Production, plus ApL Chinese (for NCS students).
- As an integral part of the senior secondary curriculum, **ApL should be valued as a useful choice for elective subject and as an important component in the roadmap of multiple pathways.** By developing students' knowledge, skills, values and attitudes through application and theories that are linked to professional and vocational fields, ApL may **cater for learner diversity** through addressing the needs of students who are less academically-oriented or have more practical and work-related inclinations so as to realise their talent and potential.
- For those who are academically capable, ApL is also a worthwhile elective subject for complementing their studies of HKDSE Category A subjects, and enriching their learning experiences through exposure to vocational and professional fields, leading to an early understanding and appreciation of how knowledge and skills are applied in the work environment.
- To broaden teachers' and principals' understanding of and exposure to the workplace, training for teachers, career guidance teachers and school management in particular has to be strengthened to update them on the value of ApL and VPET, as well as the new job opportunities in the technology-driven new economy so that both primary and secondary teachers and principals are able to provide early and appropriate guidance to their students.
- **Students' and parents' understanding of VPET can be deepened** to facilitate the promotion of ApL as an important curriculum component in itself **and to cater for learner diversity. The effort in parent education has to cover this aspect, and LPE has to include parents as a target group.**

3.4.2 To increase students' incentive to take ApL as an elective subject to dovetail with VPET as a means of catering for learner diversity and supporting students in multiple pathways and to enrich the learning

experiences of the more academically-inclined students

- In tandem with our proposal to introduce LPE early, **ApL could be offered as early as in Secondary 4.** To recognise ApL as a valued subject to broaden students' horizons, from a professional and vocational perspective, **funding eligibility for students taking ApL as the 4th elective subject can be relaxed.** Besides, the EDB may encourage more post-secondary institutions to offer **taster programmes** of short duration at the junior secondary level to provide **early exposure** to the excitements and requirements of different industries/professions and ApL courses.
- To remove the misconceived image that ApL is only for the academically less able students, a **wider range of ApL courses** can be provided so that students of different abilities may find ApL courses which suit their interests and possibly shape their future career aspirations. For instance, there can be new application-based courses in relation to STEM, creative arts, business and law through which the more academically oriented students can also apply their knowledge to practical uses or widen their horizons to experience the empowerment.
- At present, the recognition of ApL results in university admissions varies among institutions and departments. **Tertiary institutions should also be encouraged to give due recognition to students' achievements in ApL when considering them for admission to relevant programmes of study.**

University Admissions

3.5 Enhance the flexibility of university admissions for cultivating students with different talents

3.5.1 To maintain the General Entrance Requirements (GER) of 3322 in the core subjects as the basic requirement for university admissions in principle

- The Task Force understands that the GER of undergraduate programmes are one of the major concerns of schools, parents and students, resulting in backwash effects on some students who focus their time and efforts excessively on the four core subjects (i.e. Chinese Language, English Language, Mathematics and LS) at the expense of elective subjects and OLE. In some cases, students performing well in some elective subjects (e.g. STEM subjects) and/or possessing talents in certain areas (e.g. leadership, sports and arts) are not qualified for admission as they do not meet the GER. The recommendation of keeping 3322 may disappoint

those who ask for a relaxation. But a full relaxation of the GER at the system level will send out a wrong message to society and the international community that Hong Kong is compromising on the academic rigour of secondary education and abilities of students.

- While the backwash effect on the learning of the core subjects at the secondary level resulting from a relaxation is unpredictable, employers' expectations on the language proficiency and the generic skills of our graduates cannot be ignored. Given that most UGC-funded FYFD programmes actually requires students to attain a result better than 3322 for the core subjects, any change in 3322 as the GER will only, in effect, have minimal impact on admissions should there be no change in the principle of selecting secondary graduates by academic merits and should the number of UGC-funded FYFD intake places remain the same at 15 000 per year.

3.5.2 Encourage universities to exercise greater flexibility under the existing mechanism in admitting students who demonstrate talents and competencies through other means despite not fully meeting the GER

- The school sector in general perceives that university admissions hinge primarily on the HKDSE Examination results without due attention to the SLP and the OEA, and this has reinforced our examination-driven culture. The Task Force understands admissions offices' need for upholding transparency and fairness, as well as the difficulties in setting completely clear-cut criteria (other than the HKDSE Examination results) for admissions. Yet, there is **sufficient room for universities to exercise flexibility under the existing admission mechanism** to admit students who fall short of GER but are talented in different areas and identified through different channels.
- In particular, the Task Force encourages universities to expand the view on "merit" to give **greater weight to the SLP, OEA, School Principal's Nominations (SPN)**²², and the **gifted students identified** by the Hong Kong Academy for Gifted Education and other credible gifted programmes. For students who cannot meet the GER but have achievements in other realms, the Task Force highly recommends conducting interviews so as to holistically assess students' suitability for study programmes. In gist, **interviews should be more widely used and students' interview performance, as well as significant non-academic achievements**

²² **School Principal's Nominations** give due recognition to students who have contributed to social services or made outstanding achievements in non-academic areas such as sports, music, social services, creative activities or other cultural activities, or who have demonstrated leadership abilities. At present, each school would nominate about 3-4 students to enhance their chance of being admitted.

and social services, should be given greater weight and recognition in the admission process.

- Without changing the existing SPN scheme, the Task Force **proposes implementing a new SPN 2.0 Direct Admission Scheme.** Each local secondary school would have an additional quota of two nominations for the school principal to nominate students with talents and achievements in non-academic realms for **designated programmes** (e.g. Design, Physical Education, Music) proposed by universities. All student nominees have to be interviewed, taking into consideration school principals' reference on students' suitability for the chosen programmes, students' school results, as well as their SLP and OEA. If a student is found suitable for a designated programme, the Task Force **proposes that a firm offer** be made before the release of the HKDSE Examination results and such a firm offer, once accepted by the student, is binding on both the student and the institution concerned. No change in programme choice after the release of the HKDSE Examination results is allowed. Subject to the decisions of universities and nominees, there should be sufficient time for nominees to submit a late JUPAS application.
- The feasibility of this new scheme hinges on the positive feedback from the school sector, acceptance by parents, and consent of universities to set aside places of a few programmes for suitable students nominated by school principals. Given its novelty in design, the fluidity in implementation and the space needed to further discuss with university admission personnel, it may be prudent to pilot the new scheme via the non-JUPAS route or direct admission at the initial stage, with voluntary participation from individual universities/tertiary institutions.

STEM Education

3.6 Strengthen STEM education in primary and secondary schools so as to develop students' capacity to apply knowledge and skills acquired in different STEM-related subjects in an integrated and creative manner to solve daily problems

3.6.1 The EDB should more clearly define STEM education, and clarify the expectations in primary and secondary schools

- The advances in technology in the 21st century represent a new era in which human beings are required to tackle problems with the integration of knowledge from different areas and to work with people possessing different expertise. The idea behind **STEM ≠ S+T+E+M** has to be made clear. STEM represents an integration

of knowledge for 21st century competencies driven by technological advances. The integration is not restricted to the above four individual subjects since real-life problems often require wider expertise other than Science, Technology, Engineering and Mathematics.

- **At present, STEM is not a subject in the school curriculum.** It is observed that both the level of understanding and practice of STEM education in schools are very diverse. **It is important for the EDB to state clearly the expectations of implementing STEM education at the primary and secondary levels, in particular, in the acquisition of a STEM mindset and skills, and a broad-based STEM literacy in students.**

3.6.2 Against a backdrop of there being diversity of entry points and stages of progress in the promotion of STEM education in different schools, the EDB should address the different needs of schools by stepping up territory-wide support for STEM education

- The EDB should **facilitate schools' planning and implementation of STEM education by providing a set of learning framework or curriculum guides on STEM education.** The framework should duly highlight and delineate clearly the learning objectives of STEM education and the importance of the integration and application of knowledge and skills across related Key Learning Areas. It is important to **emphasise that all students, instead of the chosen few, are in need of STEM education.** The EDB has to provide more **teaching tools and exemplars** to help teachers implement STEM-related activities which reinforce the learning objectives, develop students' STEM mindset and enable them to integrate STEM knowledge and skills in solving authentic/real-life problem.
- To **strengthen the professional capacity of teachers and principals**, pre- and in-service teacher training programmes on subject knowledge and pedagogies essential for leading/designing STEM activities for primary students are needed. For junior secondary school teachers, basic STEM-training and more in-depth content and pedagogical content knowledge essential for leading/designing STEM activities for junior secondary students are needed. Besides, more advanced conceptual and procedural knowledge of science, technology, engineering and mathematics for designing and implementing integrated STEM learning activities, teaching strategies for enhancing self-directed learning and creative problem-solving should also be acquired by teachers at this level.
- Schools are recommended to appoint teachers to serve as **STEM**

co-ordinators at both the primary and secondary levels. In tandem, there is a need to provide more comprehensive programmes to nurture a community of STEM leaders who can lead the long-term development of school-based STEM education including formulating school policies in STEM, co-ordinating school-based curriculum development, and facilitating collaboration across subjects in designing and implementing integrated STEM programmes.

- **Local STEM resources centres** are to be set up in different districts of Hong Kong to provide support and advice to schools with less experience or fewer resources to implement STEM-activities independently and to organise local STEM-support networks to exchange experiences among schools.

3.6.3 A designated committee with representatives from schools, the EDB, universities, professional bodies and private sector should be set up under the CDC to oversee the long-term development of STEM education in Hong Kong, including its interface at the primary and secondary levels.

Limitations

3.7 The school curriculum has a very broad coverage. The Task Force's recommendations are geared towards providing space and opportunities for students' whole-person development which is the overarching aim of school education; catering for learner diversity; and nurturing the attributes required of students in future. The Task Force has deliberated on various issues from a holistic approach notwithstanding the tight timeframe of work and the complexities of issues.

3.8 The root of some curriculum implementation problems does not lie in the curriculum *per se* but is linked to developments in the wider contexts, such as changes in the Mainland and other regions, developments in the higher education sector, societal expectations of what talents should be, and the choice of student, parents, teachers and schools, etc. For the changes that need to be made to the current practices and mindsets, there is no easy way. All recommendations are interlocking and their effective implementation hinges on a change in culture in schools and in society. It requires whole-hearted, concerted efforts of all to make necessary compromises and changes in areas under their own purview, transcending the interest of individual subjects or stakeholder groups, with the aim of benefitting our students.

3.9 There are issues beyond the reach of the Task Force and which overlap with the remits of other task forces, examples of which include VPET, parent education and professional development of teachers. Recommendations

grouped under the six directions are not meant to be solutions squarely confined to their respective problems. Our initial recommendations are in fact intricate and intertwining. Besides, how to take forward curriculum and assessment differentiation in individual subjects should be followed up by relevant committees under the CDC and HKEAA.

Views from the Engagement and Areas with More Divergent Views

3.10 In the past few months, the Task Force extensively engaged key education stakeholders, including the primary and secondary school councils, the EC, CDC, HKEAA, representatives from the admissions offices of UGC-funded institutions, teachers' unions, employers, students, parents, chairpersons of subject committees and associations, etc., as well as enthusiastic education practitioners, to solicit their views so as to ensure that the recommendations would be based on balanced viewpoints. Broadly speaking, these stakeholders are positive about the initial recommendations proposed by the Task Force. Some of the items with more divergent views are highlighted below:

- **whether the IES of LS should be offered as an option or abolished altogether to generate more space for student learning; or whether a more fundamental change for the subject is required;**
- **whether the new SPN 2.0 Direct Admission Scheme is worth trying via the non-JUPAS route; and**
- **whether the early implementation of LPE at the primary level is necessary and appropriate; and if so, what could be done.**

3.11 Views from the public are most welcome on the various initial recommendations set out from paragraphs 3.1 – 3.6 and 3.10. Please note that the present review is not targeted at the curriculum content of individual subjects. Detailed comments on individual subjects would be relayed to the CDC for consideration at a later stage.

Chapter 4: Invitation of Views

4.1 Members of the public are welcome to provide their views, opinions and comments on the initial recommendations put forward in this Consultation Document and/or any other issues pertinent to the future development of the school curriculum. All views and comments will be taken into account when the Task Force formulates directional recommendations for inclusion in the final report to be presented to the Government by the end of 2019.

4.2 Please send written submissions in response to this Consultation Document by post, email or fax to the Task Force Secretariat **on or before 16 September 2019 (Monday)** -

Postal address: Secretariat
Task Force on Review of School Curriculum
Room 1301, 13/F, Wu Chung House
213 Queen's Road East
Wan Chai, Hong Kong

Email address: taskforce_cur@edb.gov.hk

Fax number: (852) 2573 5299

4.3 The provision of personal data in written submissions is optional. Any personal data so collected will only be used for the purpose of this consultation exercise. The data will be destroyed after analysis.

4.4 The Task Force may, as appropriate, reproduce, quote, summarise or publish any written comments received, in whole or in part, in any form and for any purpose without seeking prior permission from the contributing parties. However, the EDB will not disclose the personal data of the respondents when citing the relevant content.

Chapter 5: Way Forward

5.1 The Task Force will consider the views and feedback collected from this two-month public consultation on the initial recommendations as set out in Chapter 3 of this Consultation Document, to finalise and draw up short-/medium-/long-term recommendations in creating space and opportunities for students' whole-person development and taking forward curriculum development to better prepare our students for the future.

5.2 The Task Force will finalise its recommendations and present them in its final report to the Government by the end of 2019, if everything goes smoothly.

5.3 The directional recommendations will then be considered by the EDB and if accepted, will be followed-up under the existing mechanism by the relevant advisory bodies and organisations, such as the CDC and HKEAA, towards implementation in schools.

Task Force on Review of School Curriculum

June 2019

**Task Force on Review of School Curriculum
Membership**

Chairperson

Dr Anissa CHAN WONG Lai-kuen

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Mr CHAN Shiu-choy

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Mr KWOK Wing-keung

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Mr Joseph NGAI

Mr Addy WONG Wai-hung

Official Members

Deputy Secretary for Education (5)

Principal Assistant Secretary (Curriculum Development)

Task Force on Review of School Curriculum

Main Scope of Work

The main scope of work of the Task Force on Review of School Curriculum is to holistically review the primary and secondary curricula and to make directional recommendations on –

- How our school curricula at primary and secondary levels can be rigorous and forward-looking in enhancing students' capacity to learn and instill in them the values and qualities desired for students of the 21st century to meet future challenges as well as the needs of society;
- How to better cater for students' diverse abilities, interests, needs and aspirations;
- How to optimise the curriculum in creating space and opportunities for students' whole-person development; and
- How to better articulate the learning at the primary and secondary levels.

Task Force on Review of School Curriculum

Sub-groups

1. Sub-group on Whole-person Development

Membership:

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Mr CHAN Shiu-choy

Professor LEE Wing-on

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Principal Assistant Secretary (Curriculum Development)

2. Sub-group on Catering for Learner Diversity

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3. Sub-group on Multiple Pathways

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4. Sub-group on STEM Education

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Ms Joanne LAU Tit-mui

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Dr LEE Yeung-chung

Dr Tim WOO Kam-tim

Deputy Secretary for Education (5)

Principal Assistant Secretary (Curriculum Development)

Hong Kong School Curriculum Framework

Learning to Learn 2+ — The Hong Kong School Curriculum

A broad and balanced curriculum with diversification and specialisations (choices) for academic, professional and vocational development according to students' needs

Nurturing
lifelong & self-directed
learning capabilities

Fostering
whole-person development

SEVEN LEARNING GOALS

FIVE ESSENTIAL LEARNING EXPERIENCES

Moral and Civic Education Intellectual Development Community Service Physical and Aesthetic Development Career-related Experiences

Secondary 4-6

SS

Secondary 1-3

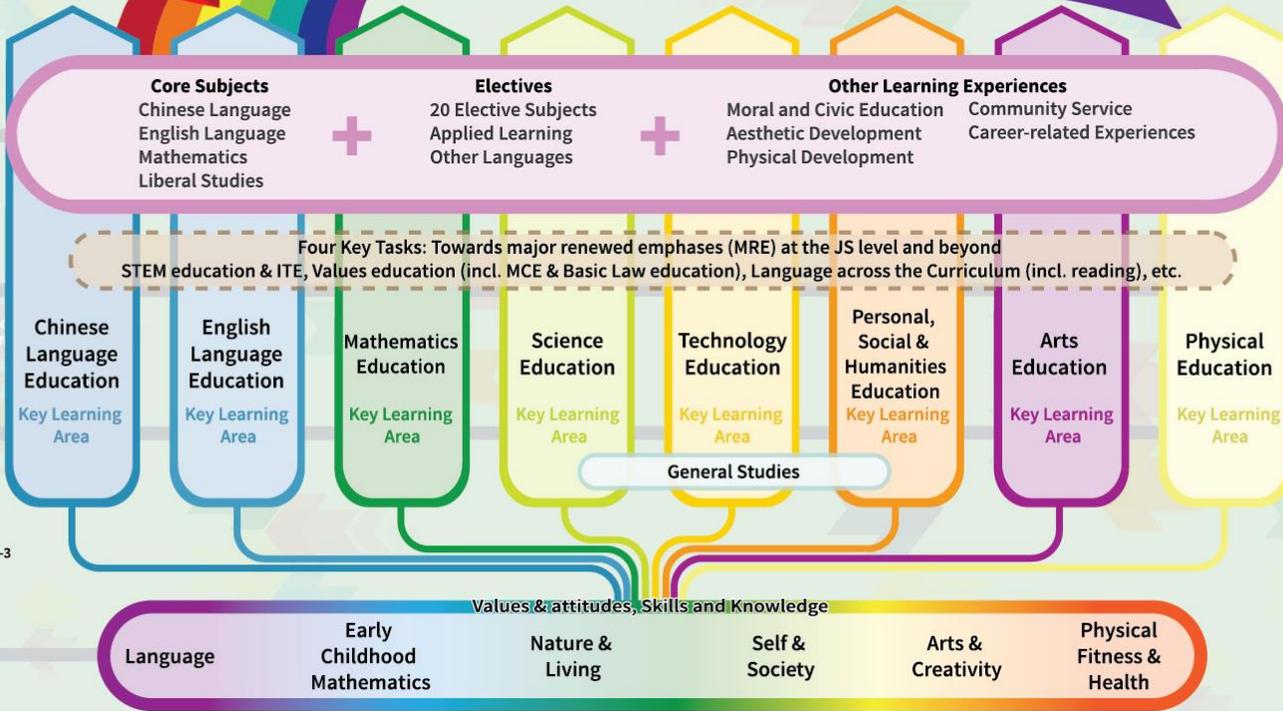
JS

Primary 1-6

P

Kindergarten 1-3

KG



Values & attitudes

Seven priority values

- Perseverance
- Respect for Others
- Responsibility
- National Identity
- Commitment
- Integrity
- Care for Others

Generic skills

- Basic Skills**
- Communication Skills
 - Mathematical Skills
 - IT Skills

Thinking Skills

- Critical Thinking Skills
- Creativity
- Problem Solving Skills

Personal & Social Skills

- Self-management Skills
- Self-learning Skills
- Collaboration Skills



Hong Kong Students' Performance in Major International Student Assessments

Hong Kong's rankings in PISA

Year	2009	2012	2015
Domain of Assessment			
Mother Tongue Reading Literacy	4th	2nd	2nd
Mathematical Literacy	3rd	3rd	2nd
Scientific Literacy	3rd	2nd	9th
(No. of participating countries/regions)	65	65	72

Remarks: Participating students were aged 15.

Hong Kong's rankings in TIMSS

Year	2007		2011		2015	
	P4	S2	P4	S2	P4	S2
Mathematics	1st	4th	3rd	4th	2nd	4th
Science	3rd	9th	9th	8th	5th	6th
(No. of participating countries/regions)	59		63		57	

Hong Kong's rankings in PIRLS

Year	2006	2011	2016
Domain of Assessment	P4	P4	P4
Mother Tongue Reading Literacy	2nd	1st	3rd
(No. of participating countries/regions)	45	45	50