



Competency assessment systems in selected places

IN06/16-17

1. Introduction

1.1 In Hong Kong, the Territory-wide System Assessment ("TSA") is an assessment administered at the territory level. It is designed to gauge students' attainment of basic competencies¹ at the end of key learning stages, i.e. Primary 3, Primary 6 and Secondary 3. In recent years, there has been much public concern about the intense pressure faced by students and teachers in dealing with TSA, especially those attending and teaching in primary schools. In response, the Government has introduced various measures to address the public concern, including the implementation of a Tryout Study to Primary 3 in 2016 with voluntary participation of schools.

1.2 At the request of the Panel on Education, the Research Office has prepared this information note aiming to study the competency assessment systems in selected overseas places. The places studied cover Australia, Canada, South Korea, the United Kingdom ("the UK²"), and the United States ("the US"), which have implemented their respective assessment systems to evaluate students' competencies and report the results in terms of one or more of the following dimensions: individual students' results; performance of the schools participating in the assessment; and overall assessment results at the territory- and/or country-wide level. The assessment systems are known as the National Assessment Program – Literacy and Numeracy ("NAPLAN") in Australia, the Pan-Canadian Assessment Program ("PCAP") in Canada, the National Assessment of Educational Achievement ("NAEA") in South Korea, the national curriculum assessments (also known as Standard Assessment Tests or SATs) in the UK, and the National Assessment of Education Progress ("NAEP") in the US.

¹ According to the Education Bureau (2016), basic competencies are essential knowledge and skills acquired by students in relation to the learning targets and objectives set out in the curriculum for each key stage.

² Although the four constituent countries of the UK follow a similar education system, there are still significant variations among them in terms of the age that children start schools to the types of test students will take. For simplicity, this information note confines the study of the UK to England.

2. Territory-wide System Assessment in Hong Kong

2.1 TSA is one of the components of Basic Competency Assessments proposed by the Education Commission back in 2000.³ It is used to gauge students' performance in three subjects, namely Chinese Language, English Language and Mathematics. The assessment results provide the Government and schools with information on students' standards in the above three key learning areas, for the purposes of school improvement in learning and teaching and Government provision of targeted support to schools which are in need of assistance. According to the Government,⁴ it is a low-stakes assessment that does not assess and report performance of individual students.

2.2 In recent years, some stakeholders have expressed grave concerns about (a) the increasingly difficult nature of TSA assessment items; and (b) the use of TSA results by the Government to evaluate school performance when considering resources allocation.⁵ The ensuing over-drilling, especially at Primary 3, has aggravated the pressures put by TSA on students and teachers.

2.3 According to the Government, over-drilling might be attributable to the reporting and the handling of TSA school-level results.⁶ In response, the Government in 2014 introduced various enhancement measures, including (a) cessation of disclosing to individual primary schools the percentage of their students achieving basic competency in Chinese Language, English Language and Mathematics to avoid comparisons within and among schools; and (b) removal of TSA as one of the Key Performance Measures⁷ for primary schools to help dispel the myth that low-performing schools in TSA will be "penalized" by the Government⁸; and (c) continuation of the alternate-year arrangement for Primary 6 TSA and Pre-Secondary One Hong Kong Attainment Test (Pre-S1 HKAT).⁹

³ Under Basic Competency Assessments, there is another component known as "Student Assessment" which aims at providing schools with an additional assessment tool. The features of the "Student Assessment" include: (a) a web-based central assessment item bank; (b) online assessments; and (c) computer marking and instant reports on students' performance.

⁴ See GovHK (2015b).

⁵ See Education Bureau (2016g).

⁶ According to the Government, some teachers, especially those teaching in primary schools, had revealed that it was not uncommon that the school-level data had been used inappropriately for comparisons within and among schools, thereby creating pressure and workload for teachers and students. See Education Bureau (2014).

⁷ Key Performance Measures help schools review the effectiveness of their work with a view to enhancing self-improvement and sustainable development.

⁸ See Education Bureau (2014).

⁹ Primary 6 students used to face the pressure of taking two internal school examinations, TSA and Pre-S1 HKAT, within weeks in June and July each year. To relieve their pressures, the Government has since 2014 put in place alternate-year arrangement for Primary 6 TSA and Pre-S1 HKAT, i.e. conducting Primary 6 TSA in odd-numbered years and pre-S1 HKAT in even-numbered years.

2.4 Further to the introduction of enhancement measures in 2014, the Government commissioned the Coordinating Committee on Basic Competency Assessment and Assessment Literacy to conduct a comprehensive review on TSA in late 2015. Based on the recommendations made by the Committee, the Government implemented a Tryout Study to Primary 3 in 2016 with voluntary participation of schools.

2.5 The Tryout Study introduces four major initiatives: (a) improving assessment papers and question design; (b) enhancing school reports to meet the needs of individual schools, such as providing detailed information analysis report which shows the learning objective and question intent of each item; (c) strengthening professional support to schools; and (d) including a questionnaire survey on students' learning attitude and motivation. The above initiatives are intended to eliminate the incentives for over-drilling students, provide targeted services to enhance the effectiveness of "Learning-Teaching-Assessment", and improve communication and deepen mutual trust among schools, parents and various stakeholders.

2.6 More recently, the Government has announced that it would extend the Tryout Study to all primary schools in 2017 under the name of Basic Competency Assessment Research Study.¹⁰ As explained by the Government, the above arrangement is not a resumption of the previous TSA. Assessment results will not be used to evaluate school performance and all government-run primary schools will take the lead in not buying supplementary exercise books in preparing for TSA.

3. Competency assessment systems in selected overseas places

3.1 Australia, Canada, South Korea, the UK and the US have administered assessments on a national level to assess and evaluate students at key learning stages with a view to better understanding their competency standard. This in turn facilitates the government and schools to make improvement to the school curriculum and strengthen the support provided to low-performing schools and/or students. The paragraphs below give an overview of the various assessment systems in the above overseas places, and the salient features of which are compared in the **Table**. This is followed by **Appendices I-VI** which give the details of each assessment system.

¹⁰ See Education Bureau (2017).

Key features and operation of the assessment systems

3.2 While all the overseas places studied follow a broadly similar assessment system, there are still variations in terms of their key features and operation. Of particular relevance are the target population, frequency of the assessment, subjects to assess and the preparation required, and modes of assessment.

Target population

3.3 Australia and the US both select primary and secondary school students to participate in the national assessments. In contrast, the participating students in the UK are sourced only from the primary schools. Canada and South Korea are similar in selecting only secondary school students to take the assessments. The former samples Grade 8 junior high school students for its PCAP, and the latter exempts primary school students from taking its NAEA to avoid testing young children.

3.4 After deciding the composition of participating students, Australia, South Korea and the UK have each put in place an assessment system in which all students at a specific grade participate. In contrast, the US and Canada use a two-stage random sampling method to select students for their national assessment. Schools are first selected at the territory level,¹¹ and within each school, students are selected from a particular grade. Indeed, the assessment systems in these two places are not designed to report results for individual students or schools, so it is not necessary for every student to take the assessment. According to the Department of Education of the US, an overall picture of student performance can be obtained by selecting a sample of students who represent the student population of the nation as a whole.

3.5 Whether the students selected/sampled can withdraw from the national assessment differs among the overseas places studied. In the US, the participation of students in the national assessment is voluntary as they can decide whether to participate if selected for the assessment. Likewise in Australia, withdrawal from the national assessment can be made by parents on grounds of religious beliefs or philosophical objections to testing. Unlike the case in the US and Australia, participation in the national assessment is compulsory in the other overseas places studied. Exemptions can only be

¹¹ The US selects participating schools from states and Canada from provinces and territories.

made for reasons such as functional disabilities, severe learning difficulties and limited proficiency in the target language of assessment.

Frequency of the assessment

3.6 All the overseas places studied, except for Canada, conduct their national assessment annually. While the UK conducts its annual national assessment in May each year, the schedules of the assessment differ among participating students. Teachers are required to administer SATs for students in the final year of key stage 1 ("KS1")¹² during the month of May, but the exact times and dates are left to schools to decide. School might spread the tests over a number of days or weeks so as to allow students to do the test in as relaxed an environment as possible. Yet, the SATs administered for students in the final year of KS2 must take place on scheduled days within a specific week in May.

Subjects to assess and the preparation required

3.7 On the subject areas to assess, literacy and numeracy feature in all national assessments studied, representing recognition of the important foundation they provide for all school learning. The national assessments in Canada, the UK and the US also include knowledge of other subject areas such as science literacy.

3.8 As to the need for students to prepare for the national assessment, the examination authorities in Australia, South Korea, the US and Canada do not expect students to make any special/excessive preparation. Australia's NAPLAN, South Korea's NAEA and the US's NAEP are intended to test the scholastic knowledge and skills a student develops over time through the school curriculum, whereas Canada's PCAP is not tied to a particular curriculum. In Australia, parents are also advised by the examination authority to treat NAPLAN assessment days as another routine event on the school calendar. In contrast, many schools in the UK run booster classes in the run-up to SATs (particularly at KS2), to bolster students' chances of performing well in the assessments. The stakes of KS2 SATs are high for

¹² SATs assess students in the final year of KS1 and KS2. In the UK, the national curriculum is divided into four KSs, comprising: (a) KS1: Ages 5-7; (b) KS2: Ages 7-11; (c) KS3: Ages 11-14; and (d) KS4: Ages 14-16. KS1 (Years 1-2) and KS2 (Years 3-6) are taught in primary schools, and KS3 and KS4 in secondary schools.

schools, as the assessment results are often used by the media to compile school "league tables" (see paragraph 3.14 for details) which rank schools on their performance in SATs.

Modes of assessment

3.9 In all the overseas places studied, students are assessed by paper-based written test with a variety of question types including multiple choices and constructed response questions (requiring students to write short phrases, two or three sentences, and/or several paragraphs to a question). Nevertheless, the US is piloting computer-based assessment on certain subjects. Australia has also planned for moving its national assessment from paper-based written tests to computer-based tests ("NAPLAN Online") from 2017 onwards.

3.10 NAPLAN Online's "tailored testing" feature allows the test to automatically adapt to students' performance and ask questions that match the student achievement level.¹³ This feature provides all students with the opportunity to better demonstrate the range of their literacy and numeracy skills. Not only does "tailored testing" provide a more precise assessment of their performance, but it is also more engaging for the participating students.

3.11 Another salient feature among the overseas places studied is the time they allow for the participating students to complete the national assessment. All but the UK conduct timed assessments. In the UK, KS1 tests are not strictly timed. Schools can give students the time they feel is appropriate to complete the assessment. The ability to work at speed is not part of the assessment.

Reporting of assessment results

3.12 The framework for reporting assessment results also varies among the overseas places studied. In Canada, assessment results are only reported at the provincial/territorial and pan-Canadian levels. The same holds for the US which reports state- and national-level assessment results. This helps avoid the public ranking of individual school-level results that might lead or push schools into competition, as well as eventually causing schools to spend more time on preparing just for the assessment.

¹³ "Tailored testing" feature allows students to answer an initial set of identical questions and then be directed to subsequent sets of questions based on the accuracy of their responses. Students with a high number of questions correct in the initial set of questions will be directed to more complex questions. Students who have a lower level of accuracy will be directed to questions that are less complex.

3.13 Unlike Canada and the US, Australia, the UK and South Korea are characterized by more comprehensive reporting of assessment results at the student, school and territory levels. Parents will receive a student report stating the performance of their child in the national assessment and whether the national standards are met. In the UK, parents also receive separate teacher assessments which report on the progress of their children in the core subject areas of writing, reading, mathematics and science. Teacher assessments take into account students' written, practical and oral classwork over time, and are coupled with the SATs results to provide complementary information about students' performance.¹⁴

3.14 In addition, school-level results are made known to the public in Australia, the UK and South Korea. They are often used by the media to create "league tables" which rank schools on assessment results. This might lead to "teaching to the test" at the expense of the wider school curriculum, as schools seek to get the good test results needed for a high position in the "league tables". In the UK, the Department of Education also makes use of school-level results to compile the School Achievement and Attainment Tables. The tables are scrutinized by the Office for Standards in Education, Children's Services and Skills (the national school inspection agency) when forming its inspection judgement. If a school's overall effectiveness is judged inadequate, inspectors must decide whether the school requires "special measures" or a "notice to improve". In this connection, public ranking of school-level results might exert pressures on those schools participating in the national assessment, particularly the low-ranking ones in the School Achievement and Attainment Tables.

Public views and revamp of the national assessment systems

3.15 In the UK, the national assessment system has been criticized for putting undue pressure on young children, especially those taking the KS2 test. This is especially the case with public ranking of schools based on their performance in SATs and the ensuing pressure on "teaching to the test". The introduction of new assessment arrangements in May 2016 has added to the criticism of the national assessment in the UK.¹⁵

¹⁴ The KS1/KS2 tests are designed to show what students have achieved in selected parts of a subject on a particular day, and teacher assessments are a judgement of performance of whole subject over the whole academic year.

¹⁵ The first national assessment was introduced in 1991 and has undergone several changes since then. Recently, the UK government introduced in September 2014 a new national curriculum to all government-funded maintained schools in England, and the first assessment based on the new national curriculum took place in 2016.

3.16 From 2016 onwards, primary school students in the UK are assessed using the new format of SATs which is designed to be tougher than before.¹⁶ The new 2016 SATs have prompted protests and boycotts from some teachers and parents. More worryingly, nearly half of participating students failed to meet the new expected standard in their KS2 SATs held in 2016. Against the above, the Education Committee of the House of Commons in September 2016 announced an inquiry into the national assessment to examine, among other things, (a) the purpose of SATs and how well the new assessment system meets this; (b) the advantages and disadvantages of assessing students at primary schools; and (c) the next steps needed to improve the system. The Education Committee has already held three evidence sessions with key stakeholders, and has yet to issue the conclusion report on SATs.

3.17 Likewise in South Korea, there had been criticisms against the use of school-level assessment results by the media to create school "league tables". This in turn leads to the problem of "teaching to the test", intense competition among schools and increased stress on students. In response to the above, the South Korean government reduced the testing time from 70 minutes to 60 minutes in 2010. It also introduced the "happy education for students' dreams and talents" policy in 2013, featuring the cessation of national assessments in elementary schools, and reduction of the subject areas tested to further alleviate students' pressure. In Australia, there are also criticisms against NAPLAN for encouraging "teaching to the test". In addition, critics question the usefulness of NAPLAN as a diagnostic test, as it does not include teacher assessments to provide a full picture of students' performance.

3.18 In comparison, the low-stakes national assessments in Canada and the US have received far less criticisms compared with their counterparts in the UK, South Korea and Australia. The criticisms focus mainly on the design of PCAP in Canada and the use of achievement levels for reporting NAEP results in the US, rather than on the pressures faced by schools and students on dealing with the national assessment.

¹⁶ According to the UK government, it has introduced a new national curriculum to be on a par with the best education systems in the world and expects children to achieve higher standards than before. This is to ensure that every child who leaves primary school has mastered the skills in reading, writing and mathematics so that they can reach their potential at secondary school and throughout their adult life. See Standards & Testing Agency (2016d).

Table – Competency assessment systems in selected places

	Hong Kong	Australia	Canada	South Korea	The UK	The US
Key features						
Name of the system	<ul style="list-style-type: none"> • Territory-wide System Assessment ("TSA"). • Beginning in 2017, the assessment at Primary 3 will be conducted under the name of "Basic Competency Assessment Research Study". 	<ul style="list-style-type: none"> • National Assessment Program – Literacy and Numeracy ("NAPLAN"). 	<ul style="list-style-type: none"> • Pan-Canadian Assessment Program ("PCAP"). 	<ul style="list-style-type: none"> • National Assessment of Educational Achievement ("NAEA"). 	<ul style="list-style-type: none"> • National curriculum assessments, also known as Standard Assessment Tests or SATs. 	<ul style="list-style-type: none"> • National Assessment of Education Progress ("NAEP"), comprising main assessments ("MA") and long-term trend assessments ("LTA").
Year of implementation	<ul style="list-style-type: none"> • 2004. 	<ul style="list-style-type: none"> • 2008. 	<ul style="list-style-type: none"> • 2007. 	<ul style="list-style-type: none"> • 2000. 	<ul style="list-style-type: none"> • 1991. 	<ul style="list-style-type: none"> • 1969.
Target groups	<ul style="list-style-type: none"> • Primary 3 (≅ age 8); Primary 6 (≅ age 11); and Secondary 3 (≅ age 14). 	<ul style="list-style-type: none"> • Both primary and secondary school students. • Students at year 3 (ages 7-8); year 5 (ages 9-10); year 7 (ages 11-12); and year 9 (ages 13-14). 	<ul style="list-style-type: none"> • Grade 8 junior high school students (ages 13-14). 	<ul style="list-style-type: none"> • Secondary school students at grade 9 (≅ age 14) and grade 11 (≅ age 16). 	<ul style="list-style-type: none"> • Primary school students in the final years of key stage 1 ("KS1") (ages 5- 7) and key stage 2 ("KS2") (ages 7-11). 	<ul style="list-style-type: none"> • NAEP MA: grade 4 primary school students (≅ age 9); as well as grades 8 (≅ age 13) and 12 (≅ age 17-18) secondary school students. • NAEP LTA: students at ages 9, 13, and 17.

Table – Competency assessment systems in selected places (cont'd)

	Hong Kong	Australia	Canada	South Korea	The UK	The US
Key features (cont'd)						
Total population or sample assessment	<ul style="list-style-type: none"> All students. 	<ul style="list-style-type: none"> All students. 	<ul style="list-style-type: none"> Schools and students are selected by random sampling. 	<ul style="list-style-type: none"> All students. 	<ul style="list-style-type: none"> All students. 	<ul style="list-style-type: none"> Schools and students are selected by random sampling.
Compulsory or voluntary assessment	<ul style="list-style-type: none"> Compulsory.⁽¹⁾ 	<ul style="list-style-type: none"> Voluntary. Parents can withdraw their children from the assessment. 	<ul style="list-style-type: none"> Compulsory.⁽¹⁾ 	<ul style="list-style-type: none"> Compulsory.⁽¹⁾ 	<ul style="list-style-type: none"> Compulsory.⁽¹⁾ 	<ul style="list-style-type: none"> Voluntary. Students sampled can decide whether to participate or not.
Assessment frequency	<ul style="list-style-type: none"> Primary 3 and Secondary 3: annually; Primary 6: biennially. 	<ul style="list-style-type: none"> Annually. 	<ul style="list-style-type: none"> Every three years. 	<ul style="list-style-type: none"> Annually. 	<ul style="list-style-type: none"> Annually. 	<ul style="list-style-type: none"> NAEP MA: annually. NAEP LTA: every four years.
Operation of assessments						
Subjects to assess	<ul style="list-style-type: none"> Chinese and English languages, and mathematics. 	<ul style="list-style-type: none"> Reading, writing, language conventions (i.e. spelling, grammar and punctuation), and numeracy. 	<ul style="list-style-type: none"> Reading, mathematics and science. 	<ul style="list-style-type: none"> Korean, mathematics and English. 	<ul style="list-style-type: none"> Reading and mathematics for both KS1 and KS2. KS2 also tests (a) grammar, punctuation and spelling; and (b) science. 	<ul style="list-style-type: none"> Mainly reading, writing, mathematics and science.
Duration of assessment	<ul style="list-style-type: none"> Time allowed varies from paper to paper. 	<ul style="list-style-type: none"> NAPLAN takes about 40 minutes to 65 minutes. 	<ul style="list-style-type: none"> A total of 90 minutes. 	<ul style="list-style-type: none"> Each test takes 60 minutes. 	<ul style="list-style-type: none"> Time allowed varies from paper to paper. KS1 test is not strictly timed.⁽²⁾ 	<ul style="list-style-type: none"> A total of 60 minutes.

Notes: (1) Exemptions can only be made for reasons such as functional disabilities, severe learning difficulties and limited proficiency in the target language of assessment.

(2) Schools can give students the time they feel is appropriate to complete the assessment. The ability to work at speed is not part of the assessment.

Table – Competency assessment systems in selected places (cont'd)

	Hong Kong	Australia	Canada	South Korea	The UK	The US
Operation of assessments (cont'd)						
Modes of assessment	<ul style="list-style-type: none"> Multiple choices and open-ended questions. 	<ul style="list-style-type: none"> Multiple choices, short-answer questions, and open-ended writing tasks. Migrating from paper-based written tests to computer-based tests (i.e. NAPLAN Online⁽³⁾). NAPLAN Online allows the test to automatically adapt to students' performance and ask questions that match individual students' achievement level. 	<ul style="list-style-type: none"> Selected response questions (multiple choices, yes/no observation, etc.) and constructed response questions.⁽⁴⁾ 	<ul style="list-style-type: none"> 70% to 80% of questions are multiple choices. Other question types include constructed response questions. 	<ul style="list-style-type: none"> A variety of question types (multiple choices, true/false, matching, open-ended questions, etc.). Apart from assessment results, students also receive separate teacher assessments for core subject areas. 	<ul style="list-style-type: none"> Multiple-choices and open-ended questions.
Preparation required	<ul style="list-style-type: none"> According to the Government, students should have acquired the basic competencies through daily learning, and neither excessive drilling for the test nor purchasing additional TSA practice papers is necessary. 	<ul style="list-style-type: none"> No. Parents are advised to treat the assessment days as another routine school event. 	<ul style="list-style-type: none"> No. Assessment is not tied to a particular curriculum. 	<ul style="list-style-type: none"> No. Assessments only test the knowledge/ skills a student develops over time through the school curriculum. 	<ul style="list-style-type: none"> Some schools run booster classes in the run-up to the assessments. 	<ul style="list-style-type: none"> No. Assessments only test the knowledge/skills a student develops over time through the school curriculum.

Notes: (3) See paragraph 3.10 for details of how NAPLAN Online works.

(4) Students must write a response (e.g. short phrases/sentences and/or several paragraphs) to answer a question.

Table – Competency assessment systems in selected places (cont'd)

	Hong Kong	Australia	Canada	South Korea	The UK	The US
Reporting of assessment results						
Indicators measuring students' performance	<ul style="list-style-type: none"> Territory-wide percentages of students achieving basic competency in Chinese Language, English Language and Mathematics. 	<ul style="list-style-type: none"> NAPLAN results are reported using five national achievement scales. 	<ul style="list-style-type: none"> Overall mean scores; and the percentages of students attaining specified performance levels. 	<ul style="list-style-type: none"> Students' performance on each of the subjects tested is divided into four "achievement levels" based on their NAEA scores. 	<ul style="list-style-type: none"> Test scores are converted into scaled scores where 100 is the expected standard for the tests. 	<ul style="list-style-type: none"> Average test scores for each tested subject; and the percentage of students at or above a particular achievement level.
Reporting of assessment results at:						
student level	X	✓	X	✓	✓	X
school level	✓	✓	X	✓	✓	X
territory/national level	✓	✓	✓	✓	✓	✓
Comparison of assessment results	<ul style="list-style-type: none"> Participating schools are provided with their own school data showing how their students perform against the territory-wide basic competency standards.^{(5), (6)} 	<ul style="list-style-type: none"> Comparison among students, schools and states/territories. The media compiles school "league tables" ranking schools on their NAPLAN results. 	<ul style="list-style-type: none"> Comparison among provinces and territories as well as against the national average. 	<ul style="list-style-type: none"> Comparison among schools and provinces/metropolitan cities. The media compiles "league tables" ranking schools on their NAEA results. 	<ul style="list-style-type: none"> KS1 test results are not sent to the government. Comparison can only be made at KS2 across schools and local-authority areas.⁽⁷⁾ 	<ul style="list-style-type: none"> Comparison across states and large districts.
Major objective(s)	<ul style="list-style-type: none"> Assessment for learning. 	<ul style="list-style-type: none"> Evaluation purposes. 	<ul style="list-style-type: none"> Evaluation purposes. 	<ul style="list-style-type: none"> Evaluation purposes. 	<ul style="list-style-type: none"> Evaluation and accountability purposes.⁽⁸⁾ 	<ul style="list-style-type: none"> Evaluation purposes.

Notes: (5) The number and percentage of students achieving basic competency in Chinese Language, English Language and Mathematics are only disclosed to individual secondary schools starting from 2014.

(6) The public can only download the territory-wide assessment reports containing territory-wide data.

(7) KS2 tests are marked externally, and the Department of Education publishes the test results by school and local-authority area in the School Achievement and Attainment Tables.

(8) In the UK, schools are held accountable for the performance of their students in the national assessment. The students' assessment result affects a school's ranking in the School Achievement and Attainment Tables, which are scrutinized by the national school inspection agency when forming its inspection judgement.

Table – Competency assessment systems in selected places (cont'd)

	Hong Kong	Australia	Canada	South Korea	The UK	The US
Public acceptability						
Public views	<ul style="list-style-type: none"> There has been much concern over the intense pressure faced by students, teachers and schools in dealing with TSA. 	<ul style="list-style-type: none"> "League tables" might pressure schools to "teaching to the test". 	<ul style="list-style-type: none"> The low-stakes nature of PCPA might affect individual students' motivation and engagement in the assessment. 	<ul style="list-style-type: none"> Making the NAEA results public creates unintended consequences such as "teaching to the test" and creating competition among schools and students. 	<ul style="list-style-type: none"> SATs have been criticized for putting undue pressure on young children. The high-stakes nature of KS2 tests also leads to "teaching to the test". 	<ul style="list-style-type: none"> NAEP reports the performance of students by achievement levels. The classification of achievement levels has been criticized for being arbitrary and might not reflect individual students' performance.
Review of the system	<ul style="list-style-type: none"> Implementation of the Tryout Study in 2016 with various enhancement measures such as improving the question design. 	<ul style="list-style-type: none"> Migrating from paper-based written tests to computer-based tests. 	<ul style="list-style-type: none"> The federal government has not conducted any review on PCAP. 	<ul style="list-style-type: none"> Abolition of national assessments in primary schools and reduction of the tested subjects and testing time for the assessments conducted in secondary schools. 	<ul style="list-style-type: none"> An inquiry into the national curriculum assessment is being conducted by the Education Committee of the House of Commons. 	<ul style="list-style-type: none"> The National Center for Education Statistics⁽⁹⁾ has reviewed NAEP and recommended less emphasis to be placed on the achievement levels. Other alternatives such as average scale scores should be given more focus.

Note: (9) The National Center for Education Statistics is the primary federal entity for collecting and analyzing data related to education in the US and other countries.

Competency assessment system in Hong Kong

(a) Key features of the system		
Descriptor	In brief	More details
Name of the system	Territory-wide System Assessment ("TSA").	<ul style="list-style-type: none"> TSA is one of the components of Basic Competency Assessments. It is administered at three learning stages, at Primary 3 ("P3"), Primary 6 ("P6") and Secondary 3 ("S3"). Beginning in 2017, the assessments at P3 will be conducted under the name of "Basic Competency Assessment Research Study".
Year of implementation	2004.	<ul style="list-style-type: none"> TSA began at P3 in 2004, P6 in 2005 and S3 in 2006.
Target groups	P3, P6 and S3.	<ul style="list-style-type: none"> Students start their primary schooling at the age of around six and there are six years of schooling at the primary level. They will then receive six years of secondary education, including three years of junior secondary and three years of senior secondary education.
Major objective	Assessment for learning. ¹	<ul style="list-style-type: none"> The main purposes of TSA are to: (a) provide the Government and schools with information on students' standards in key learning areas; (b) provide teachers with positive feedback to enhance the effectiveness of learning and teaching; and (c) enhance assessment literacy and promote the cultures of assessment for learning in schools.
Assessment frequency	<ul style="list-style-type: none"> P3 and S3: annually. P6: alternate years. 	<ul style="list-style-type: none"> Since 2014, P6 TSA has been conducted in odd-numbered years.²
Compulsory or voluntary participation	Schools receiving government subsidies participate in the assessment.	<ul style="list-style-type: none"> Schools can exempt students from the whole or part(s) of the assessment after making sure that it is due to the students' disability that they are unable to participate in the assessment. In 2016, TSA was conducted as a Tryout Study at P3 with participation of more than 50 primary schools of different types on a voluntary basis.

¹ According to the Government, TSA facilitates assessment for learning by providing schools with objective data on students' performances.

² However, schools can opt to take the assessment in even-numbered years on a voluntary basis.

Competency assessment system in Hong Kong

(b) Operation of the system		
Descriptor	In brief	More details
Organization responsible for the assessment	Hong Kong Examinations and Assessment Authority.	<ul style="list-style-type: none"> The Hong Kong Examinations and Assessment Authority is an independent, self-financing statutory body responsible for administering public examinations in Hong Kong.
Subjects to assess	Chinese Language, English Language and Mathematics.	<ul style="list-style-type: none"> Chinese Language and English Language are sub-divided into reading, writing, listening and oral assessments; for Chinese Language, there is also audio-visual assessment.
Duration of assessment	Time allowed varies from paper to paper.	<ul style="list-style-type: none"> For instance, the 2016 P3 TSA allowed 30 minutes for English Language – Reading and Writing and 40 minutes for Mathematics.
Mode of assessment	Both multiple-choices and open-ended questions.	<ul style="list-style-type: none"> Mainly in pencil and paper mode, except for Chinese Language and English Language with oral assessments as well. In 2016, a questionnaire was included to survey on students' learning attitude and motivation.³
Preparation required	No. According to the Government, students should have acquired the basic competencies through daily learning, and neither excessive drilling for the test nor purchasing additional TSA practice papers is necessary.	<ul style="list-style-type: none"> There are TSA past question papers for download. Students can purchase supplementary exercises from commercial publishers, while schools have reportedly arranged extra classes and training for TSA with the use of mock papers.

³ The questionnaire survey is a new initiative aiming to collect students' non-academic data (e.g. time spent on extra-curricular activities, learning interests and motivation, etc.) with a view to providing schools with more information to (a) gain a better understanding of the factors affecting learning performance and (b) provide further assistance for student learning.

Competency assessment system in Hong Kong

(c) Reporting of the assessment results		
Descriptor	In brief	More details
Indicators measuring students' performance	The territory-wide percentages of students achieving basic competency in Chinese Language, English Language and Mathematics. ⁴	<ul style="list-style-type: none"> For instance, the territory-wide percentage of P3 students achieving basic competency in Chinese Language, English Language and Mathematics were 86.4%, 80.4% and 87.6% respectively in 2015.
Assessment reports	<ul style="list-style-type: none"> For each assessment year, there is a territory-wide report open to the public, providing a summary of the TSA results at the territory level. The participating schools are provided with their own school reports. 	<ul style="list-style-type: none"> At the school level, TSA school reports are provided. On top of the overall students' attainment rates of a school in Chinese Language, English Language and Mathematics, the school reports provide item analysis and other supplementary data, including the percentage of students who have answered each item correctly and the performance of students in questions related to the respective basic competency.
Comparison of assessment results	Comparison at the school level should not be made.	<ul style="list-style-type: none"> Scores of individual students are not reported. To avoid inappropriate comparison within and among schools, individual primary schools have since 2014 no longer been provided with information on the overall attainment rates achieved by their students in Chinese Language, English Language and Mathematics.
Use of assessment results	The Government and schools make use of assessment data to enhance teaching arrangements and facilitate students' learning.	<ul style="list-style-type: none"> At the territory-wide level, assessment data helps the Government review education policies, provide resources, set directions of support measures and professional training, etc. At the school level, assessment data helps teachers identify the strengths and weaknesses of overall students and formulate plans to improve the effectiveness of learning and teaching.

⁴ After the first year's administration of TSA, panels of judges were formed to set the basic competency standards for the three subjects which have remain unchanged since then.

Competency assessment system in Hong Kong

(d) Public acceptability of the system	
Descriptor	Highlights
Public views	<ul style="list-style-type: none"> • In recent years, TSA has become an issue of concern widely discussed by the local community. Some stakeholders have expressed grave concerns about the pressure TSA puts on students and teachers arising from excessive drilling especially in primary schools. Excessive drilling has been envisaged to be related to the increasingly difficult assessment items and inappropriate comparison of results within and among schools. • In response to the community concern, the Government launched a number of enhancement measures in 2014, including (a) ceasing to disclose the basic competency attainment rates to individual primary schools to avoid comparison; and (b) removing TSA from the Key Performance Measures for primary schools.
Review of the system	<ul style="list-style-type: none"> • The Coordinating Committee on Basic Competency Assessment and Assessment Literacy conducted a comprehensive review on the implementation of TSA in late 2015. • On the recommendation of the Committee, a Tryout Study was conducted at P3 in 2016 with four major new initiatives: (a) improving assessment papers and question design; (b) enhancing school reports to meet the needs of individual schools; (c) strengthening professional support measures; and (d) including a questionnaire survey on students' learning attitude and motivation. • As further explained by the Government, the questions for the 2016 Tryout Study were in general easier than before, aligning with the requirements of basic competencies of P3 students. On school reports, there were four types of assessment reports available for schools' selection: existing version, simplified version, integrated version and information analysis report.⁵ Schools might, in the light of school context and on a subject basis, choose one or more types of reports.
Latest developments	<ul style="list-style-type: none"> • The Government announced in January 2017 that the Tryout Study would be extended to all primary schools in 2017 under the name of the Basic Competency Assessment Research Study. • The Government said that the arrangement was not a resumption of the previous TSA and that the new initiatives embedded in the 2016 Tryout Study would remain in the 2017 assessments.

⁵ For school report in simplified version, it only provides performance data of an individual school in respect of each question item without the overall territory-wide data. As to school report in integrated version, it is a consolidated report on basic competencies by item groups and provides exemplars on students' overall performance. Meanwhile, information analysis report provides the corresponding key learning objective, basic competency and question intent of each question item, as well as an analysis of options of multiple-choice items. See Education Bureau (2016f).

Competency assessment system in Australia

(a) Key features of the system		
Descriptor	In brief	More details
Name of the system	National Assessment Program – Literacy and Numeracy ("NAPLAN").	<ul style="list-style-type: none"> NAPLAN is a national assessment that tests the knowledge and skills of all students in Years 3, 5, 7 and 9 in the domains of reading, writing, language conventions (i.e. spelling, grammar and punctuation) and numeracy. It is part of the National Assessment Program.⁶
Year of implementation	2008.	<ul style="list-style-type: none"> NAPLAN was commenced in 2008 to enhance collection, consistency and reporting of literacy and numeracy performance data of students across the country. Before that, each state and territory administered its own literacy and numeracy assessment programme.
Target groups	All students in Years 3, 5, 7 and 9.	<ul style="list-style-type: none"> Education system varies among states and territories in Australia. In general, primary school runs for six or seven years, from Year 1 to Year 6 or 7. Secondary school then runs for three or four years, from Years 7 to 10 or Years 8 to 10, and senior secondary school runs for another two years from Year 11 to Year 12.
Major objective	Providing data on students' literacy and numeracy achievements for evaluation purposes.	<ul style="list-style-type: none"> NAPLAN provides teachers and other key stakeholders with an objective measure to periodically assess an individual student's attainment against the national benchmarks and other students in his or her year level.
Assessment frequency	Annually.	<ul style="list-style-type: none"> In May each year.
Compulsory or voluntary assessment	Voluntary. Withdrawal can be made by students' parents on the grounds of religious beliefs or philosophical objections to testing.	<ul style="list-style-type: none"> Exemptions may be granted for students with a language background other than English or for students with a disability.

⁶ The National Assessment Program, comprising NAPLAN and the sample assessments, is the measure to assess whether students are meeting important educational outcomes. Only a small sample of Year 6 and Year 10 students are required to participate in the sample assessments. The sample assessments occur annually and test students' knowledge and skills in (a) science literacy; (b) civics and citizenship; and (c) information and communication technology ("ICT") literacy on a three-yearly rolling basis. For example, the sample assessments began in 2003 with science literacy, followed by civics and citizenship in 2004, and ICT literacy in 2005.

Competency assessment system in Australia

(b) Operation of the system		
Descriptor	In brief	More details
Organization responsible for the assessment	The Australian Curriculum, Assessment and Reporting Authority ("ACARA").	<ul style="list-style-type: none"> ACARA is the independent statutory authority responsible for developing the national curriculum, administering national assessments, and collecting and publishing school performance data to support learning for students in Australia.
Subjects to assess	Four domains: (a) reading; (b) writing; (c) language conventions (i.e. spelling, grammar and punctuation); and (d) numeracy.	<ul style="list-style-type: none"> NAPLAN aims to test skills in literacy and numeracy that a student develops over time through the national curriculum.
Duration of assessment	NAPLAN takes about 40 minutes to 65 minutes.	<ul style="list-style-type: none"> Paper-based NAPLAN has been conducted over a three-day period. Reading: 45 minutes allowed for Year 3; 50 minutes for Year 5; and 65 minutes for Years 7 and 9. Writing: 40 minutes allowed for all year levels. Language conventions: 40 minutes allowed for Years 3 and 5; and 45 minutes for Years 7 and 9. Numeracy: 45 minutes allowed for Year 3; 50 minutes for Year 5; and 60 minutes for Years 7 and 9.
Modes of assessment	<ul style="list-style-type: none"> Written tests consisting of multiple choices, short-answer questions and open-ended writing tasks. NAPLAN will move from paper-based written tests to computer-based tests ("NAPLAN Online"). NAPLAN Online's "tailored testing" feature allows the test to automatically adapt to student performance and ask questions that match the student achievement level. 	<ul style="list-style-type: none"> NAPLAN will move online from 2017 over a three-year period. NAPLAN Online allows students to answer an initial set of identical questions and then be directed to subsequent sets of questions based on the accuracy of their responses. Students with a high number of questions correct will be directed to more complex questions. Students who have a lower level of accuracy in the initial set of questions will be directed to questions that are less complex.⁷

⁷ Questions in NAPLAN Online will be different from those in the paper-based written tests with the inclusion of a range of different question formats and interactive features such as clickable text, drag and drop, and audio dictation.

Competency assessment system in Australia

(b) Operation of the system (cont'd)		
Descriptor	In brief	More details
Preparation required	<ul style="list-style-type: none"> Past test papers and sample materials are posted onto the ACARA website which students can download to familiarize with the type of questions that are asked in the tests. According to ACARA, NAPLAN tests are intended to test skills in literacy and numeracy that a student develops over time through the national curriculum, so excessive practice is unnecessary. Parents should treat NAPLAN test days as another routine event on the national calendar. 	<ul style="list-style-type: none"> Students can purchase commercial test preparation services or products (e.g. tests and answers and diagnostic tools) to prepare for NAPLAN. Yet, ACARA has advised that students who are considering purchasing these services or products need to make assessment as to their suitability.
(c) Reporting of the assessment results		
Descriptor	In brief	More details
Indicators measuring students' performance	<ul style="list-style-type: none"> NAPLAN results are reported using five national achievement scales, one for each of the domains of reading, writing, and numeracy, and two for language conventions domain (i.e. spelling and punctuation). Each national achievement scale consists of 10 bands, which represent the increasing complexity of the knowledge and skills assessed by NAPLAN from Years 3 to 9. A national minimum standard is set for each national achievement scale.⁸ The raw score of an individual student get in a domain is converted to a "scaled score"⁹ and then mapped onto one of the bands of the national achievement scale established for that domain. A student is considered to be at a particular band when his or her scaled score is at or above the cut score for the band. 	<ul style="list-style-type: none"> For each year level, only six of the 10 bands are shown on the student report such that: <ol style="list-style-type: none"> Year 3 student reports show bands 1 to 6, and the national minimum standard is band 2; Year 5 student reports show bands 3 to 8, and the national minimum standard is band 4; Year 7 student reports show bands 4 to 9, and the national minimum standard is band 5; and Year 9 student reports show bands 5 to 10, and the national minimum standard is band 6.

⁸ The second lowest band on the national achievement scale reported for each year level represents the national minimum standard expected of students at that year level. The national minimum standard is the agreed minimum acceptable standard of knowledge and skills without which a student will have difficulty making sufficient progress at school.

⁹ The conversion into scaled score helps test results to be reported consistently from one year to the next, in view of the possible slight differences in difficulty between the years.

Competency assessment system in Australia

(c) Reporting of the assessment results (cont'd)		
Descriptor	In brief	More details
Assessment reports	ACARA provides assessment results at the student, school, and national levels.	<ul style="list-style-type: none"> Individual student results are reported in a student report, whereas individual school results are released on the "My School" website.¹⁰ National reports are released on the ACARA website.
Comparison of assessment results	Student reports, the "My School" website, and national reports are designed to allow comparison among students and schools as well as across states and territories.	<ul style="list-style-type: none"> Individual student reports are designed to enable students to compare their results against other students at school, the national average, the national minimum standards, and in some states and territories, the school average. The "My School" website allows a school to compare its students' results with those of schools serving students with similar socio-educational backgrounds and all schools in Australia. The national reports include assessment results by state/territory gender, indigenous status, and parental occupation and education at each year level and for each tested domain.
Use of assessment results	NAPLAN facilitates the monitoring of students' progress over time. It also allows schools to identify strengths and weaknesses in their teaching programmes.	<ul style="list-style-type: none"> Schools identified as having below average student outcomes in literacy and numeracy are allocated additional funding to assist them in raising literacy and numeracy performance.

¹⁰ The "My School" website provides profiles of Australian schools, including information such as school programmes, academic performance, workforce, funding sources, student characteristics and enrolment and attendance rates.

Competency assessment system in Australia

(d) Public acceptability of the system	
Descriptor	Highlights
Public views	<ul style="list-style-type: none"> Some stakeholders agree that NAPLAN has achieved its intended objectives, but there are others who question making NAPLAN results public. In particular, the test results are used by the media to create "league table" which might bring about unintended consequences such as: (a) exerting pressures on low-ranking schools; and (b) encouraging "teaching to the test" (such as prioritizing literacy and numeracy over other areas of learning and over-emphasizing minimum competencies at the expense of creative and analytical skills). Critics also question the usefulness of NAPLAN as a diagnostic test, as it does not include teacher assessments to provide a full picture of a student's performance.
Review of the system	<ul style="list-style-type: none"> The Senate conducted inquiries into the administration and reporting of NAPLAN testing in 2010 and the effectiveness of NAPLAN in 2013. The committee reports issued after the inquiries recommend, among other things, ACARA should (a) explore ways to assist the underachievers; and (b) include annual testing from Years 3 to 10 in order to more accurately track student performance¹¹.
Refinements/improvements made/planned, if any	<ul style="list-style-type: none"> NAPLAN Online will be implemented from 2017 in an effort to: <ul style="list-style-type: none"> (a) ensure that high performing students are adequately challenged and that low achieving students are given the opportunity to demonstrate their knowledge; (b) broaden the scope of the assessments; and (c) provide teachers and schools with more targeted and detailed information on their students' performance on NAPLAN.

¹¹ The government disagreed with this recommendation, stating that further large-scale cohort testing would not be the best option for giving parents and teachers better information.

Competency assessment system in Canada

(a) Key features of the system		
Descriptor	In brief	More details
Name of the system	Pan-Canadian Assessment Program ("PCAP").	<ul style="list-style-type: none"> PCAP is a national assessment for measuring the knowledge and skills of Grade 8 secondary school students in three subjects: reading, mathematics and science. It is administered in both official languages of Canada, English and French.
Year of implementation	2007.	<ul style="list-style-type: none"> PCAP was introduced in 2007 to replace the School Achievement Indicators Program for reflecting changes in school curriculum, integrating the increased jurisdictional emphasis on international assessments,¹² and allowing for the testing of the core subjects of reading, mathematics and science.
Target group	All Grade 8 junior high school students regardless of age.	<ul style="list-style-type: none"> In Canada, elementary-secondary education generally consists of 12 years of study, Grade 1 through Grade 12. The point of transition between elementary and secondary school varies among provinces and territories. Nevertheless, elementary schools usually admit students from the ages of 6 through to 11 (Grades 1-6), before they proceed to junior high schools (Grades 7-9).
Major objective	Assessment of learning.	<ul style="list-style-type: none"> Curriculums and assessments vary among provinces and territories in Canada. Nevertheless, all Canadian students study reading, mathematics and science, and PCAP assessments identify the knowledge and skills in those subjects that are common to students across the country. The development of PCAP thus ensures the availability of comparable data on the performance of students at a comparable point of schooling.
Assessment frequency	Triennial.	<ul style="list-style-type: none"> PCAP is administered every three years. The latest PCAP was held in 2016.
Compulsory or voluntary assessment	Compulsory.	<ul style="list-style-type: none"> A representative sample of Grade 8 students is selected to participate in PCAP, using a two-stage sampling method. Schools are first randomly selected from each jurisdiction, and within each school, students are randomly selected from Grade 8 classes. Students can be exempted from PCAP only for reasons such as: (a) functional disabilities; (b) intellectual disabilities; and (c) limited proficiency in English or French (the target languages for PCAP) to participate in the assessment.

¹² PCAP's structure has been designed to align with that used for the Programme for International Student Assessment ("PISA"), which is conducted by the Organisation for Economic Co-operation and Development. PISA is a triennial international survey which aims to evaluate the knowledge and skills of 15-year-old students around the world in the fields of reading, mathematics and science. Each time, one of those three domains is the main focus of assessment.

Competency assessment system in Canada

(b) Operation of the system		
Descriptor	In brief	More details
Organization responsible for the assessment	The Council of Ministers of Education ("CMEC").	<ul style="list-style-type: none"> CMEC was formed in 1967 by the provincial and territorial ministers responsible for education to provide a forum in which they could discuss and act on projects and initiatives of mutual interest, including assessing the knowledge and skills of Canadian students.
Subjects to assess	Reading, mathematics and science.	<ul style="list-style-type: none"> Every PCAP assessment has one of the three tested subjects as the main focus ("primary domain"), along with a minor focus on the other two subjects ("minor domains").¹³ The primary and minor domains are rotated every PCAP assessment.¹⁴ In addition, each time PCAP is administered, the primary domain coincides with the major tested subject of PISA which is administered every two years later.¹⁵
Duration of assessment	90 minutes.	<ul style="list-style-type: none"> The test takes about 90 minutes to complete. Those students requiring more time will be given up to an additional 30 minutes to complete their work. All students must respond to a questionnaire about their interests, learning attitudes and classroom activities after they have completed the test items. Another 30 minutes are granted to complete the questionnaire.¹⁶

¹³ Compared with the minor domains, the primary domain is more thoroughly assessed and tests a larger sample of students.

¹⁴ For example, in 2007, reading was the primary domain followed by mathematics in 2010 and science in 2013. The primary domain was again on reading in the PCAP 2016, with mathematics and science as the minor domains.

¹⁵ The fourth PCAP was administered in 2016 with reading as the primary domain. It is expected that a significant portion of the Grade 8 student cohort from the PCAP 2016 will take the PISA 2018 assessment when those students are 15 years old. As the PISA 2018 will also have reading as its primary domain, it will be possible to compare performance patterns between the PCAP 2016 and the PISA 2018.

¹⁶ In addition to the participating students, teachers and school principals are also required to complete a contextual questionnaire. Data from these questionnaires allow educators, researchers, and policymakers to examine the relationship between achievement, contextual factors, learning attitude and teaching strategies.

Competency assessment system in Canada

(b) Operation of the system (cont'd)		
Descriptor	In brief	More details
Mode of assessment	<ul style="list-style-type: none"> Written test consisting of (a) selected response questions; and (b) constructed response questions. The reading test might include an item in which students are required to read a short text and discuss what it meant to them. 	<ul style="list-style-type: none"> In selected response questions, students are provided with a list of choices from which they must select a response. The question types include multiple choices, check boxes and true-or-false statements. As to constructed response questions, students must write a response to a question. The responses can range from short phrases and two or three sentences to several paragraphs.
Preparation required	No.	<ul style="list-style-type: none"> According to CMEC, PCAP is not tied to a particular curriculum and students do not need to study for it. Normal classroom activities in the tested subject areas should provide ample preparation for the assessment.
(c) Reporting of the assessment results		
Descriptor	In brief	More details
Indicators measuring students' performance	<ul style="list-style-type: none"> For the primary domain, student achievements are reported in terms of (a) overall mean scores and the percentages of students attaining specified performance levels; and (b) overall mean scores for each of sub-domains. Items (a) and (b) are further reported by jurisdiction, language and gender. For the two minor domains, student achievements are only reported for overall mean scores by jurisdiction, language and gender. 	<ul style="list-style-type: none"> The primary domain has a larger number of assessment items, which enables the reporting of results for sub-domains. For example, the PCAP 2013 assessed student performance in four sub-domains (nature of science, life science, physical science and earth science). PCAP develops performance levels that relate a range of PCAP scores to levels of knowledge and skills measured by the assessment.¹⁷ A student is considered to be at a particular performance level when he or she is able to achieve a PCAP score that is at or above the cut score for the level.

¹⁷ In the PCAP 2013, scientific literacy is expressed on a four-level performance scale. Level 4 is the highest level, whereas Level 1 is considered the acceptable or "baseline proficiency", i.e. the level represents the expected level of performance for Grade 8 students.

Competency assessment system in Canada

(c) Reporting of the assessment results (cont'd)		
Descriptor	In brief	More details
Assessment report	CMEC only reports the assessment results at the provincial/territorial level and the pan-Canadian level.	<ul style="list-style-type: none"> There are no reporting of assessment results at the school and student levels.
Comparison of assessment results	Comparison among provinces and territories as well as against the national average.	<ul style="list-style-type: none"> CMEC stresses that the assessment results should not be used to reflect students' individual performance, nor should they be used to compare between schools.
Use of assessment results	<ul style="list-style-type: none"> Education systems differ from one jurisdiction to another in Canada. PCAP allows a variety of education systems across Canada to be compared according to a set of common benchmarks in reading, mathematics and science. By agreeing to common benchmarks, provinces and territories are able to determine their relative performance in relation to each other, even if their approaches to education may differ. 	<ul style="list-style-type: none"> With PCAP, jurisdictions could validate the assessment results for their Grade 8 students against other jurisdictional, pan-Canadian and international results. This in turn provides a basis for examining their curriculum and other aspects of education system. PCAP is also designed to measure the cumulative effect of schooling up to the immediate years after the end of the elementary education. Getting information on achievement in the core subject areas for this particular group of junior high school students makes it possible to measure the effect of several years of schooling while still leaving enough time to address identified deficiencies in future years.
(d) Public acceptability of the system		
Descriptor	Highlights	
Public views	<ul style="list-style-type: none"> PCAP is not administered to all students and as such, whether students from different jurisdictions have achieved similar level of competency may not be truly known. Another area of concern is the low-stakes nature of PCAP and the ensuing lack of motivation and engagement on the part of students to take the assessment. 	
Review of the system	<ul style="list-style-type: none"> The federal government has not conducted any review on PCAP in recent years. 	

Competency assessment system in South Korea

(a) Key features of the system		
Descriptor	In brief	More details
Name of the system	National Assessment of Educational Achievement ("NAEA").	<ul style="list-style-type: none"> NAEA assesses the knowledge and skills of all Grades 9 and 11 students on the subject areas of Korean language, mathematics, and English of the national curriculum.
Year of implementation	2000.	<ul style="list-style-type: none"> The NAEA master plan was formulated in 1998 proposing assessments to evaluate the national curriculum and identify the progress of students. NAEA took two years to develop before it was implemented in 2000.
Target groups	All students in Grades 9 and 11.	<ul style="list-style-type: none"> The elementary-secondary education in South Korea comprises six years of elementary school (Grades 1 to 6), three years of middle school (Grades 7 to 9) and three years of high school (Grades 10 to 12). NAEA had been administered to a sample of students in Grades 6, 9 and 10 until 2009, when NAEA was converted into a full cohort national assessment for Grades 6, 9 and 10 students. The change was to identify underachieving students and provide them with support so that no student would fall below the national minimum standard. NAEA was subsequently revamped with the following two adjustments to reduce the stress on students: (a) Grade 10 students were replaced by Grade 11 students in 2010; and (b) Grade 6 students were exempted in 2013.
Major objective	Providing data on students' literacy and numeracy achievements.	<ul style="list-style-type: none"> The major purposes of NAEA are to make use of the assessment data for evaluation of the quality of education at the national level and the appropriateness of the national curriculum.
Assessment frequency	Annually.	<ul style="list-style-type: none"> In June/July each year.
Compulsory or voluntary assessment	Compulsory.	<ul style="list-style-type: none"> Compulsory for all Grades 9 and 11 students, except for those attending "assessment-ineligible schools".¹⁸

¹⁸ "Assessment-ineligible schools" refer to those schools which do not implement the national curriculum. These include vocational schools and specialist schools which have their own curriculum to teach.

Competency assessment system in South Korea

(b) Operation of the system		
Descriptor	In brief	More details
Organization responsible for the assessment	Korea Institute for Curriculum and Evaluation ("KICE").	<ul style="list-style-type: none"> KICE is a government-funded educational research institute responsible for the development of the national curriculum and the implementation of assessments and tests.
Subjects to assess	Korean, mathematics and English.	<ul style="list-style-type: none"> In 2013, the subjects tested were reduced from five (Korean, mathematics, English, science and social studies) to currently three (Korean, mathematics and English) to alleviate the stress of students taking NAEA.¹⁹
Duration of assessment	Each test lasts for 60 minutes.	<ul style="list-style-type: none"> The testing time by subject was reduced from 70 minutes to 60 minutes in 2010. All students must also respond to a questionnaire and are granted 20 minutes to complete the questionnaire.
Mode of assessment	A combination of written tests and questionnaires.	<ul style="list-style-type: none"> Each test includes 30 to 40 questions, of which 70% to 80% are multiple choices. Other question types include constructed response questions. Students are required to complete a questionnaire which collects their background information.²⁰
Preparation required	No need for preparation. Nevertheless, past test papers are made available to students and their parents.	<ul style="list-style-type: none"> NAEA tests are intended to test the knowledge and skills in languages and mathematics that a student develops over time through the national curriculum.
(c) Reporting of the assessment results		
Descriptor	In brief	More details
Indicators measuring students' performance	NAEA evaluates students' achievement level based on their understanding of the content of the national curriculum. Students' performance on each of the subjects tested is divided into four "achievement levels" based on their NAEA scores.	<ul style="list-style-type: none"> There are four achievement levels, namely "advanced", "proficient", "basic", and "below basic". The national minimum is set at the basic level. A student is considered to be at a particular achievement level when he or she is able to achieve a NAEA score that is at or above the cut score for that level.

¹⁹ The tests on science and social studies are no longer compulsory for all Grades 9 and 11 students since 2013, and they are currently administered to a sample of Grade 9 students.

²⁰ NAEA also administers questionnaires to school principals to gather information on their school characteristics.

Competency assessment system in South Korea

(c) Reporting of the assessment results (cont'd)		
Descriptor	In brief	More details
Assessment results	KICE reports the results at the student, school and national levels.	<ul style="list-style-type: none"> Individual student results are reported in the student report. Individual school results are released in the School Information Disclosure System,²¹ while national reports are posted onto a website managed by KICE.
Comparison of assessment results	Comparison among schools and across provinces/metropolitan cities.	<ul style="list-style-type: none"> Individual schools are required by law to disclose NAEA-related information such as their participation rates and percentages of achievement levels achieved in the School Information Disclosure System. National reports disclose the assessment results by subject, which are further reported by gender and the percentages of achievement levels achieved.
Use of assessment results	The assessment results are used to provide national trend data on education performance.	<ul style="list-style-type: none"> Since 2013, NAEA has shifted away from being an outcomes-based accountability system through measures such as discontinuation of the government-funded interventions strictly associated with NAEA results.²² The government has instead implemented a new intervention measure called Do-Dream schools to screen underachieving students based on teacher recommendations, psychological assessment and other tests instead of their NAEA results. Do-Dream schools holistically help underachieving students through services beyond academic support which include individualized support, counselling and after-school support to enhance their motivation, self-esteem, and social skills.
(d) Public acceptability of the system		
Descriptor	Highlights	
Public views	<ul style="list-style-type: none"> Teacher unions, parents and other stakeholders question making the NAEA results public. The disclosure creates unintended consequences such as exerting pressures on low-ranking schools, creating intense competition among schools and leading to "teaching to the test". 	
Review of the system	<ul style="list-style-type: none"> The Ministry of Education introduced the policy "happy education for students' dreams and talents" in 2013, with the objectives of (a) pursuing a balanced development of students; (b) focusing on reducing stress of students; and (c) providing enriched learning opportunities. The policy measures so implemented included the exclusion of elementary schools from NAEA and discontinuation of the government-funded interventions strictly associated with NAEA results as mentioned above. 	

²¹ The School Information Disclosure System is a website managed by the Ministry of Education to provide the public with school profiles with respect to areas such as the school facilities, enrolment rates and academic performance.

²² Before 2013, the South Korean government held schools accountable for their students' performance through the implementation of intervention measures (such as remedial learning) to improve performance of underachievers identified through NAEA.

Competency assessment system in the United Kingdom²³

(a) Key features of the system		
Descriptor	In brief	More details
Name of the system	National curriculum assessments.	<ul style="list-style-type: none"> National curriculum assessments, also known as Standard Assessment Tests or SATs, refer to the statutory assessments carried out in primary schools in England.
Year of implementation	1991.	<ul style="list-style-type: none"> The first national assessment was introduced in 1991 and has undergone several changes since then. Most recently, the UK government introduced in September 2014 a new national curriculum to all government-funded maintained schools in England,²⁴ and the first assessment based on the new national curriculum took place in 2016. According to the UK government, the assessments are more demanding and the expected standard are higher from 2016 onwards, the intention of which is to assess whether children are well prepared for secondary education.
Target groups	Primary students in the final year of key stages 1 and 2.	<ul style="list-style-type: none"> In England, the national curriculum is divided into four key stages ("KS"), comprising: (a) KS1: Ages 5-7 (Years 1-2); (b) KS2: Ages 7-11 (Years 3-6); (c) KS3: Ages 11-14 (Years 7-9); and (d) KS4: Ages 14-16 (Years 10-11). KS1 and KS2 are taught in primary schools, and KS3 and KS4 in secondary schools.
Major objectives	Providing data to assess students' attainment and hold schools accountable for the attainment made by their students.	<ul style="list-style-type: none"> KS1 tests measure young children's attainment and give an indication of the progress they have made since they started school. Meanwhile, KS2 tests assess how well students are prepared for secondary education. The results of KS2 tests are also used as evidence for comparing performance between schools as well as a means for pushing schools to improve.

²³ Although the four constituent countries of the UK follow a broadly similar education system, there are still significant variations among them in terms of the age that children start schools to the types of tests they take. For simplicity, this information note confines the study of the UK to England.

²⁴ The national curriculum covers learning for all children aged 5-16 in England. It standardizes what should be taught in primary and secondary schools, specifying both the subjects that should be taught and the standards which students studying them should reach. Maintained schools are under a statutory duty to follow the national curriculum, but other types of schools like academies and private schools are not required to do so. Academies are publicly-funded independent schools, whereas private schools charge fees to attend instead of being funded by the government.

Competency assessment system in the United Kingdom

(a) Key features of the system (cont'd)		
Descriptor	In brief	More details
Assessment frequency	Annually.	<ul style="list-style-type: none"> Usually in May each year. Teachers are required to administer KS1 tests during the month of May, but the exact times and dates are left to schools to decide. Schools might spread the tests over a number of days or weeks so as to allow students to do the test in as relaxed an environment as possible. In contrast, KS2 tests must be taken on scheduled days and usually take place during a specific week in May.
Compulsory or voluntary assessment	Compulsory.	<ul style="list-style-type: none"> All maintained schools are required to administer the tests. Participation is optional for other types of schools. Headteachers might exempt students from taking the tests for reasons such as severe learning difficulties and serious illness resulting in prolonged absence from school.
(b) Operation of the system		
Descriptor	In brief	More details
Organization responsible for the assessment	The Standard and Testing Agency.	<ul style="list-style-type: none"> The Standard and Testing Agency is an executive agency of the Department of Education. It is responsible for the development and delivery of assessments for children up to age 14 (i.e. the end of KS3).
Subjects to assess	<ul style="list-style-type: none"> KS1: reading and mathematics. KS2: (a) reading; (b) grammar, punctuation and spelling; (c) mathematics; and (d) science. 	<ul style="list-style-type: none"> There is also a grammar, punctuation and spelling test at the end of KS1. Schools can choose whether to administer the test. The KS2 science test is a biennial test which will take place in 2018. It is also a sampling test as only a percentage of schools are selected to administer the test.

Competency assessment system in the United Kingdom

(b) Operation of the system (cont'd)		
Descriptor	In brief	More details
Duration of assessment	<ul style="list-style-type: none"> 2017 KS1 test: reading (1 hour and 10 minutes); and mathematics (55 minutes). 2017 KS2 test: reading (1 hour); grammar, punctuation and spelling (1 hour); and mathematics (1 hour and 50 minutes).²⁵ 	<ul style="list-style-type: none"> Unlike KS2 tests, KS1 tests are not strictly timed. Schools can give students the amount of time they feel is appropriate to complete the test. The ability to work at speed is not part of the assessment.
Mode of assessment	<ul style="list-style-type: none"> A combination of written tests and teacher assessment. There are a variety of question types in the written tests.²⁶ 	<ul style="list-style-type: none"> At the end of KS1 and KS2, teachers are required to provide teacher assessments which report on the progress of their students in the core subject areas of writing, reading, mathematics and science.²⁷ Teacher assessments, coupled with the K1/K2 test results, are intended to provide a full picture of a student's attainment.²⁸ When making teacher assessments, teachers must use their knowledge of a student's work over time which particularly takes into account the student's written, practical and oral classwork. Teachers are also required to consider the KS1 test results for the assessments of students at the end of KS1.
Preparation required	Past test papers and sample materials could be downloaded from the government's website.	<ul style="list-style-type: none"> Students can purchase commercial preparation services and/or practice books, and some schools run booster classes in the run-up to the tests (particularly for students taking KS2 test).

²⁵ The KS2 science test is a biennial test that will not take place in 2107.

²⁶ For example, KS1 reading test contains question types such as multiple choices, true/false, matching, short questions and open-ended questions. There is also a variety of questions in KS1 mathematics test, including multiple choices, matching, true/false, completing a chart or table and drawing a shape. Some questions also require participating students to show or explain their working.

²⁷ For example, students who have completed the KS1 programme will receive one of the following three standard teacher assessments for writing, reading and mathematics: (a) working towards expected standard; (b) working at the expected standard; and (c) working at greater depth. In contrast, there is only one standard, i.e. whether working at the expected standard, for KS1 science.

²⁸ While the KS1/KS2 tests are designed to show what students have achieved in selected parts of a subject on a particular test day, teacher assessments are a judgement of performance of whole subject over the whole academic year.

Competency assessment system in the United Kingdom

(c) Reporting of the assessment results		
Descriptor	In brief	More details
Indicators measuring students' performance	The total number of marks a student get in KS1/KS2 tests (i.e. raw score) is converted into scaled score ²⁹ where 100 is the expected standard for the tests. ³⁰	<ul style="list-style-type: none"> Towards the end of the summer term, parents will receive a report stating their child's raw score, scaled score and whether the scaled score meets the national standard. They also receive separate teacher assessments from the school.
Assessment reports	<ul style="list-style-type: none"> KS1 test results are only available to the parents of participating students. KS2 test results are reported at the student, school and territory levels. 	<ul style="list-style-type: none"> KS1 tests are marked by teachers within the schools. Schools neither publish the test results nor send them to the government. Yet, parents are allowed to access their child's test results. KS2 tests are marked externally. Parents can access their child's test results. The Department of Education also publishes the test results by school and local-authority area in the School Achievement and Attainment Tables of its website.
Comparison of assessment results	The School Achievement and Attainment Tables allow the comparison among schools in terms of their KS2 test results.	<ul style="list-style-type: none"> The design of the School Achievement and Attainment Tables allows the comparison of a school's KS2 test result against that of other schools with a similar catchment profile and in England as a whole.
Use of assessment results	<ul style="list-style-type: none"> The KS1 and KS2 assessments facilitate teachers to understand how their students are doing and put in place support to help them improve if needed. KS2 test results are also used to compile the School Achievement and Attainment Tables, which hold schools accountable for the attainment and progress made by their students. 	<ul style="list-style-type: none"> The School Achievement and Attainment Tables are meant to assist the school inspection process conducted by the Office for Standards in Education, Children's Services and Skills ("Ofsted").³¹ The tables are scrutinized by Ofsted when forming its inspection judgement. If a school's overall effectiveness is judged inadequate, inspectors must decide whether the school requires "special measures" or a "notice to improve". Parents also take into account the School Achievement and Attainment Tables when choosing their children's school.

²⁹ The conversion into scaled score helps test results to be reported consistently from one year to the next, in view of the possible slight differences in difficulty between the years.

³⁰ A score below 100 indicates that the student needs more support, whereas a score of above 100 suggests the student is working at a higher level than expected for his or her age.

³¹ Ofsted is a non-ministerial government department which inspects and regulates services that care for children and young people, and services providing education and skills for learners of all ages.

Competency assessment system in the United Kingdom

(d) Public acceptability of the system	
Descriptor	Highlights
Public views	<ul style="list-style-type: none"> • The national curriculum assessments have attracted criticisms from parents, teaching unions and other stakeholders. The assessments have been criticized for putting undue pressure on young children (particularly at end of KS1), and possibly giving them a sense of failure early in their schooling. • Critics also question the high-stakes nature of KS2 tests. This might result in teaching becoming too focused on the content of the tests, as a way for schools to get the good test results needed for a high position in the School Achievement and Attainment Tables. • The introduction of new assessment arrangements in May 2016 has added to the criticism of the national assessment in the UK. From 2016 onwards, primary school students are assessed using the new format of SATs which is designed to be tougher than before.³² The new 2016 SATs have prompted protests and boycotts from some teachers and parents. More worryingly, nearly half of participating students failed to meet the new expected standard in their KS2 SATs held in 2016.
Review of the system	<ul style="list-style-type: none"> • In September 2016, the Education Committee of the House of Commons announced an inquiry into the national curriculum assessments. As part of the inquiry, the Education Committee examines (a) the purpose of SATs and how well the new assessment system meets this; (b) the advantages and disadvantages of assessing students at primary schools; and (c) the next steps needed to improve the system. The Education Committee has already held three evidence sessions with key stakeholders, and has yet to issue the conclusion report on SATs.

³² According to the UK government, it has introduced a new national curriculum to be on a par with the best education systems in the world and expects children to achieve higher standards than before. This is to ensure that every child who leaves primary schools has mastered the skills in reading, writing and mathematics so that they can reach their potential at secondary school and throughout their adult life. See Standards & Testing Agency (2016d).

Competency assessment system in the United States

(a) Key features of the system		
Descriptor	In brief	More details
Name of the system	National Assessment of Education Progress ("NAEP").	<ul style="list-style-type: none"> NAEP, also known as the Nation's Report Card, measures the achievements of students who are attending primary and secondary classes. It has two types of assessments, namely main NAEP assessments and long-term trend NAEP assessments. The former are administered to Grades 4, 8, and 12 students, whereas the latter are administered to those students at ages 9, 13 and 17. For the main NAEP assessments, academic performance data is collected and reported at the national level, and at the state and district levels for certain assessment subjects. As to the long-term trend NAEP assessments, performance data is collected and reported at the national level only.
Year of implementation	1969.	<ul style="list-style-type: none"> The idea of national assessment emerged in the early 1960s. The planning of NAEP began in 1964 and the first national assessments were conducted in 1969. NAEP assessments reporting at the state level began in 1990 on a trial basis and later became permanent. Assessment reporting at the district-level began in 2002 and is only available for some large urban districts.
Target groups	<ul style="list-style-type: none"> Main NAEP assessments: Grades 4, 8, and 12 students. Long-term trend NAEP assessments: students at ages 9, 13 and 17. 	<ul style="list-style-type: none"> In the US, children begin primary school (commonly called elementary school) from Grade 1 at around age 6. After five or six years, they go to secondary school comprising (a) middle school/junior high school (generally three years from Grade 6 to Grade 8) and (b) high school (generally 4 years from Grade 9 to Grade 12). After graduating from high school, students may go on to college or university.
Major objective	Assessing the academic performance and progress of the students of the US as a whole.	<ul style="list-style-type: none"> Two major goals of NAEP are to: (a) compare the academic performance of students in different states and (b) track students' progress over time. To meet the dual goals, nationally representative samples of students are selected to participate in either the main NAEP assessments or the long-term trend NAEP assessments.

Competency assessment system in the United States

(a) Key features of the system (cont'd)		
Descriptor	In brief	More details
Assessment frequency	<ul style="list-style-type: none"> Main NAEP assessments: annually. Long-term trend NAEP assessments: every four years. 	<ul style="list-style-type: none"> Main NAEP assessments are conducted between January and March every year. Long-term trend NAEP assessments take place every four years, in spring for age 17, autumn for age 13, and winter for age 9.
Compulsory or voluntary assessment	Voluntary participation by student and school.	<ul style="list-style-type: none"> Schools and students are selected by random sampling.³³ States receiving designated education funding (i.e. Title I funding) are required to participate in NAEP reading and mathematics assessments at Grades 4 and 8. Yet it is voluntary for students to take the assessment if selected.
(b) Operation of the system		
Descriptor	In brief	More details
Organization responsible for the assessment	National Center for Education Statistics.	<ul style="list-style-type: none"> The National Center for Education Statistics is the primary federal entity for collecting and analyzing data related to education in the US and other countries. It is located within the Institute of Education Sciences, the executive arm of the Department of Education.
Subjects to assess	A range of subjects including mathematics, reading, writing and science.	<ul style="list-style-type: none"> For the main NAEP assessments, the subject areas vary every year. Assessments are given most frequently in mathematics, reading, science, and writing.³⁴ Other subjects such as the arts, civics, economics, geography and the US history are assessed periodically. Each selected student is only assessed in one subject area. For the long-term trend NAEP, assessments are given in reading and mathematics using some questions repeatedly to ensure comparability across the years.

³³ The schools selected to participate in NAEP are representative of the student demographics and geographic composition of the state as a whole. To ensure that the student sample represents students from large and small schools in the appropriate proportions, large schools are more likely to be selected than small ones. Within each selected school, students are randomly selected to participate.

³⁴ Reading and mathematics are assessed at Grades 4 and 8 every two years.

Competency assessment system in the United States

(b) Operation of the system (cont'd)		
Descriptor	In brief	More details
Duration of assessment	Students usually spend up to 60 minutes to complete the assessment.	<ul style="list-style-type: none"> There is no penalty for not completing the assessment in the time permitted. A student may stop taking the assessment or omit questions at any point.
Mode of assessment	A combination of multiple-choices and open-ended questions, with an inclusion of a questionnaire.	<ul style="list-style-type: none"> Assessment is conducted during regular school hours. In 2016, NAEP mathematics and reading assessments were piloted on tablets with an attached keyboard, a stylus and earbuds. Some questions included multimedia, such as audio and video. The questionnaire collects information on students' demographic characteristics, opportunities to learn in and outside of the classroom, and educational experiences.³⁵
Preparation required	No. Yet after each assessment, some NAEP questions are published and students can download them on the website of the National Center for Education Statistics.	<ul style="list-style-type: none"> Special preparation for NAEP is not necessary. The material in the assessment is designed to encompass those topics that should already be part of the school curriculum for Grades 4, 8, and 12.

³⁵ Survey questionnaires are also given to teachers and school administrators to gather information on teacher training, instructional practices and school policies.

Competency assessment system in the United States

(c) Reporting of the assessment results		
Descriptor	In brief	More details
Indicators measuring students' performance	For each subject tested, results are reported as (a) average scale scores and (b) percentage of students at or above a particular achievement level.	<ul style="list-style-type: none"> • Average scale scores represent how well participating students perform in the assessment. The scale of a NAEP subject typically ranges from 0 to 500. • There are three achievement levels for each grade assessed by NAEP: Basic, Proficient, or Advanced. The National Center for Education Statistics categories each student as being at or above a particular achievement level based on their performance in NAEP.
Assessment reports	All assessment results are available at the national level, and some at the state and district levels.	<ul style="list-style-type: none"> • All results are neither reported at individual school/student level. • For results that are available at the state level, they are not reported annually. For example, state-level results in mathematics and reading at Grades 4 and 8 are reported every two years. State-level results include public schools only. • Results in mathematics and reading at Grades 4 and 8 are also available at the district level in some large urban districts such as the New York City and Boston and they are just reported every two years.
Comparison of assessment results	Only at the state and district levels.	<ul style="list-style-type: none"> • NAEP does not calculate scores for individual students. However, there are results grouped by student demographics, e.g. by race/gender.
Use of assessment results	Results are used to assess progress and develop measures to improve education system in the US.	<ul style="list-style-type: none"> • The assessment data are used by schools, parents, policymakers, and researchers.

Competency assessment system in the United States

(d) Public acceptability of the system	
Descriptor	Highlights
Public views	<ul style="list-style-type: none"> While NAEP has been around since 1969 with the claim of "gold standard" of assessments,³⁶ there are public critics that the achievement levels (i.e. Basic, Proficient, and Advanced) are somewhat arbitrary without strong science to support. At present, the National Center for Education Statistics determines the minimum scores a student must obtain in order to meet various achievement levels. These minimum scores are known as scale cut score. According to some stakeholders, the determination of achievement levels based on the scale cut score is likely lead to inaccurate conclusions about students' performance.
Review of the system	<ul style="list-style-type: none"> Several reviews had been carried out by the Government Accountability Office in the 1990s and 2000s on issues like standard-setting approach, development costs, and participation of students with disabilities in NAEP. In more recent years, the National Center for Education Statistics assembled a panel to discuss, consider and develop ideas on the role of NAEP in the decades ahead with a number of recommendations. Among others, the panel has suggested that much less emphasis should be placed on achievement levels and that NAEP reports should more clearly explain the limitations of reporting achievement levels. Other alternatives such as average scale scores and standard deviations of performance gaps should be given more focus. The panel also considers that redesigning NAEP to provide results at the individual or school level is not a worthwhile endeavour as this would dramatically increase complexity and cost for the survey. Besides, individual scores are already provided by other state assessments.

³⁶ According to the National Center for Education Statistics, NAEP is often called the "gold standard" of assessments because it is developed using the best assessment and content specialists, education experts, and teachers from around the nation. See An Introduction to NAEP (2016).

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Prepared by Tiffany NG and Samantha LAU
Research Office
Information Services Division
Legislative Council Secretariat
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Tel: 2871 2122

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