

For discussion
on 12 December 2016

Legislative Council Panel on Education
Latest Development on the Review of the Territory-wide System Assessment

Purpose

This paper updates Members on the latest development on the review of the Territory-wide System Assessment (TSA) conducted by the Coordinating Committee on Basic Competency Assessment and Assessment Literacy (the Committee).

Background

2. In 2000, the Education Commission proposed to introduce Basic Competency Assessments in its report entitled “Learning for Life. Learning through Life” to better enhance the effectiveness of learning and teaching. Being one of the components of Basic Competency Assessments, TSA is an assessment on students’ Basic Competencies in the three subjects of Chinese Language, English Language and Mathematics upon completion of the three key learning stages (i.e. Primary 3, Primary 6 and Secondary 3 levels). Basic Competencies form part of the curriculum and have been integrated in students’ daily learning and internal assessments made by schools. Students are expected to acquire the Basic Competencies in the three subjects in order to proceed effectively to the next key learning stage.

3. The background, purpose and implementation details of TSA are set out in LC Paper No. CB(4)435/15-16(01).

Functions of TSA

4. Implementation of TSA serves the function of promoting “assessment for learning” through the use of assessment data for provision of feedback to inform learning and teaching. The feedback includes information at the territory-wide and school levels, each serving different functions. The ensuing paragraphs elaborate on how information at the territory-wide and school levels serves the functions of enhancing teaching arrangements and facilitating students’ learning.

Territory-wide Level

5. On the territory-wide level, TSA data helps the Government review education policies, provide resources and set directions of support measures and professional training, etc. Details are as follows:

Facilitating the review of education policies

6. TSA data reflects the overall performance of Hong Kong students and its trends of changes in the subjects of Chinese Language, English Language and Mathematics. The Education Bureau (EDB) takes into account students' overall performance in TSA and different Basic Competencies in formulating the directions and priorities of education policies.

7. Through TSA data, EDB gauged the ability of lower and upper primary students in comprehending and summarising the main ideas of a passage. Therefore, EDB encourages schools to enhance the strategies for teaching of reading, and has set “reading to learn” as one of the four key tasks of the curriculum reform. For strengthening “reading to learn”, a series of online resources have also been developed for primary and secondary schools' reference.

Setting directions and priorities of professional training

8. EDB analyses TSA data to better understand the learning progress and teaching needs of Hong Kong students in the three subjects of Chinese Language, English Language and Mathematics, with a view to determining directions and priorities for professional training.

9. With the aim of improving language education at the pre-primary, primary and secondary levels, EDB has, by making reference to TSA data, sought an injection into the Language Fund to strengthen support for teachers and students at pre-primary and primary levels¹.

¹Details are set out in LC Paper No. FCR2004-05(44). Support measures for teachers include:

- (i) sponsoring local serving teachers of the English Language subject at primary schools to attend overseas immersion courses lasting four to eight weeks or more;
- (ii) sponsoring primary school teachers to attend intensive courses focused on specific aspects of the learning and teaching of the language subjects, such as grammar/phonics in context; and
- (iii) providing professional development programmes for teachers of pre-primary school teachers.

Providing learning and teaching resources

10. In the light of the learning difficulties reflected by students' performance in TSA, EDB conducts case studies and collects views of teachers through focus group meetings. The Web-based Learning and Teaching Support (WLTS), an online learning and teaching platform, was developed in 2003 to provide learning and teaching resource packages for teachers' use or reference. Relevant resources, including teaching plans, suggested learning activities, presentations on teaching practices, worksheets and assessment tasks, etc., enable teachers to help students acquire Basic Competencies in an effective manner. At present, there are more than 730 sets of learning and teaching resources for Primary 1 to Secondary 3 levels, covering nearly 70% of Basic Competencies for the three learning stages. It is expected that resource packages covering all Basic Competencies will be available by 2019 for teachers' reference and use.

Planning school-based support services

11. Curriculum, learning and teaching, and assessment are interrelated. EDB has been providing school-based support services to schools. Specific to the needs of the individual participating schools, support officers would help schools make use of the assessment data such as student assignments, test and examination results and performance in TSA to understand the learning progress of students, and collaborate with schools' teaching staff to plan the curriculum, design appropriate teaching strategies and use various assessment methods through lesson preparation meetings and the Evaluation-Planning-Implementation-Evaluation (EPIE) process, in order to provide effective feedback for students. In the 2014/15 school year, about 370 primary schools in the territory were provided with the school-based support services, among which about 280 primary schools were provided with support services in relation to the subjects of Chinese Language, English Language and Mathematics. Schools can apply for individual support services in accordance with school-based development needs.

Reviewing the curriculum

12. TSA data is a source of reference for curriculum review. Take the Basic Competency of 'using "gram" (g) or "kilogram" (kg) as the unit to measure or compare the weight of objects and using "hour" and "minute", "minute" and "second" or "second" to measure the time used in activities' in Mathematics as an example. Taking into account the average TSA performance of students in this aspect as well as the views of frontline teachers collected in focus group interviews on reasons for students not being able to grasp the content, EDB and the Curriculum Development Council Committee on Mathematics

Education propose an adjustment in the sequence of related topics when reviewing the Mathematics curriculum at primary levels, suggesting that students could be exposed to this topic after accumulating more related learning experience. The related recommendation has been included in the latest proposed revisions to the Mathematics Education Key Learning Area Curriculum Guide (Primary 1 – Secondary 6). Subject to the approval of the Curriculum Development Council, the Guide is expected to be published in 2017.

Using related data for further analysis

13. The Hong Kong Examinations and Assessment Authority (HKEAA) reports on the research findings of the cohort study for the same group of students in the annual TSA report. HKEAA also conducts further analysis on areas of unsatisfactory performance by students, with a view to formulating and providing adequate support.

School Level

14. 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 (starting from 2014, individual primary schools are no longer provided with the attainment rates), 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.

15. Related information helps teachers identify the strengths and weaknesses of overall students and formulate plans to improve the effectiveness of learning and teaching with reference to the assessment data and their schools' development needs. After analysing students' performance in TSA, schools will generally follow up through various measures, such as adjusting the teaching content, improving the design of assignments/assessments, arranging after-school remedial programmes to cater for learner diversity, etc. Related follow up measures addressing the competencies of students participating in TSA can be implemented after students are promoted to another level, and can address the learning needs of students of different classes with a view to building a solid foundation for the students' grasp of Basic Competencies in the three subjects of Chinese Language, English Language and Mathematics.

Enhancement and Review of TSA

16. Since the introduction of TSA in 2004 (Primary 3, Primary 6² and Secondary 3 TSA were first conducted in 2004, 2005 and 2006 respectively), EDB has been maintaining communication with various stakeholders (including schools, teachers, parents, primary and secondary schools councils, the Committee on Home-School Co-operation and the TSA Concern Group) to understand the implementation situation.

17. In 2014, the EDB launched a number of enhancement measures (including not disclosing attainment rates to individual primary schools, removing TSA from the Key Performance Measures for primary schools, continuing administering Primary 6 TSA in alternate years and enhancing TSA's reporting functions in stages), with a view to striking a balance between preserving the core functions of TSA and lessening the pressure on students and teachers. Details have been set out in LC Paper No. CB(4)284/13-14(03).

18. As part of the continuous improvement of the implementation arrangements of TSA, the Committee conducted a comprehensive review of the operation and various implementation arrangements of TSA in late 2015. In February 2016, the Committee submitted a review report, which reaffirmed the intent and value of the establishment of TSA and recognised the functional use of TSA data to provide feedback to learning and teaching. In response to public concerns about over-drilling induced by TSA, various stakeholders' perception of the stakes involved as well as the provision of support for students and schools, various short, medium and long-term recommendations have been made. The report can be accessed at www.edb.gov.hk/attachment/en/curriculum-development/tsa/fullreport.pdf.

19. To reflect more clearly the intent of Basic Competency Assessments, the Committee considers that the assessment papers and questions should be adjusted, and that the reports distributed to schools could adopt different formats. Such initiatives should be implemented as a tryout arrangement in 2016, of which the outcomes would inform the 2017 territory-wide implementation.

20. The Committee recommends that the 2016 Tryout Study (Primary 3) (Tryout Study) should have the following objectives:

- (i) To validate whether the revamped papers and item design proposed by the relevant working group would uphold the reliability and validity of the assessment while aligning with the requirements of Basic Competencies of

² Starting from 2014, Primary 6 TSA is implemented in every odd-number year (i.e. 2015, 2017 and so on).

- Primary 3 students to tie in with the curriculum and student learning;
- (ii) To try out different reporting formats to meet the needs of individual schools;
 - (iii) To strengthen the provision of professional support measures for schools on homework policy, assessment literacy, enhancement of learning and teaching (e.g. via the promotion of reading) as well as TSA in the course of the tryout. Public education would also need to be strengthened so as to enhance stakeholders' awareness of TSA as part of the concept of "assessment for learning" with a view to enhancing quality education;
 - (iv) At the territory-wide level, to keep track of the attainment of Basic Competencies of all students and to provide continuous data for other related studies; and
 - (v) To demonstrate in good faith the low-stakes nature of TSA that it would not exert pressure on school sponsoring bodies, schools and parents; and to foster mutual trust through participation, sharing and collaboration in promoting quality education with a view to facilitating effective and pleasurable student learning.

Latest Development

21. In line with the Committee's recommendations, the Tryout Study covers four major initiatives as below:

- (i) Improving assessment papers and question design;
- (ii) Enhancing school reports;
- (iii) Strengthening professional support measures; and
- (iv) Including a questionnaire survey on students' learning attitude and motivation.

The above basket of initiatives is intended to eliminate the incentives for over-drilling induced by TSA; provide targeted service to enhance the overall effectiveness of the cycle of Learning-Teaching-Assessment as an integral part to benefit students; and improve communication and deepen mutual trust between schools and parents.

22. More than 50 primary schools from different districts, types of schools (government, subsidised, Direct Subsidy Scheme and private schools) and school sizes (about 10% of the total number of primary schools in the territory) participated in the Tryout Study.

23. The Committee collected views and suggestions in the following ways with regard to implementation of the four major initiatives of the Tryout Study, with a view to

providing feedback and facilitating the review of related measures:

(i) Qualitative approach

- Focus groups/interviews: The targets are principals, curriculum leaders, teachers (including invigilators who are teachers from participating schools and markers), students, parents, councils and other relevant groups. The main purpose is to collect stakeholders' views and suggestions on assessment items, reports, various support measures and stakes involved.
- Case studies: Four schools are invited to participate in the case studies, which aim to take a more in-depth look at the support measures and stakes involved, in a bid to understand how well schools have made effective use of various support measures to enhance their assessment literacy, and also examine the effectiveness and limitations of the implementation of the Tryout Study at schools, and look into the solutions or views and suggestions.

(ii) Quantitative approach

- Questionnaire surveys/opinion surveys: The targets are principals, curriculum leaders, teachers (including invigilators who are teachers from participating schools and markers), students and parents. The main purpose is to collect stakeholders' views and suggestions on assessment items, reports, various support measures and stakes involved.

Improving assessment papers and question design

24. TSA is an objective assessment tool with reliability and validity in assessing students' overall Basic Competencies in the three subjects of Chinese Language, English Language and Mathematics upon completing the stages of Primary 3, Primary 6 and Secondary 3 education. To maintain the standards set, HKEAA conducts a research test to maintain the stability and consistency of the standards. Under the Tryout Study, the assessments, including the revised design and items, are implemented in accordance with the Basic Competency standards set in 2004, including standard setting, standard maintenance and estimation of students' ability indices.

25. As part of the Tryout Study, HKEAA submitted on 9 November 2016 the 2016 Territory-wide System Assessment Report, which indicated that the territory-wide attainment rates of Primary 3 students in the three subjects of Chinese Language, English Language and Mathematics remained steady. The overall performance and territory-wide attainment rates of Primary 3 students are indicative of the reliability and validity of the

improved assessment papers and question design which are applicable to assess if students have attained Basic Competency.

26. For the purpose of reviewing the improved assessment papers and question design, EDB and HKEAA organised nine focus group meetings for teachers, three meetings for markers, three sharing sessions for principals of schools participating in the Tryout Study, and three seminars to collect views of different stakeholders. According to the feedback collected from the focus group meetings, markers' meetings, sharing sessions, questionnaire surveys and seminars, the improved assessment papers and question design could align with the requirements of Basic Competencies of Primary 3 students, tie in with the spirit of the curriculum and address students' learning needs. As such, students are able to acquire Basic Competencies in their daily learning without the need of extra preparation or over-drilling specifically for TSA. In this connection, the improved assessment papers and question design has effectively eliminated the incentives for over-drilling induced by TSA.

Enhancing school reports

27. Under the Tryout Study, school reports are further enhanced. Four types of school reports³ with different coverage are made available. Schools may, in the light of school-based needs, choose the school reports that best facilitate analysis of students' performance.

28. Over 96% of schools participating in the Tryout Study opted for the existing version, integrated version and information analysis report with regard to their school-based needs, while two schools selected the simplified version. To collect views of different stakeholders on the enhanced school reports, EDB and HKEAA organised three seminars on the analysis of TSA reports, three focus group meetings for teachers, and three sharing sessions for principals of schools participating in the Tryout Study. According to the choices made by participating schools on the different types of assessment reports and the feedback collected through the above channels, schools generally considered that assessment data which was too simple or limited was not conducive to providing feedback to learning and teaching. Most of the schools appreciated and welcomed the information

³ The four types of assessment reports are (1) Existing version; (2) Simplified version, which only provides data of an individual school without the overall data for reference purposes; (3) Integrated version, which is a consolidated report on Basic Competencies by item groups and provides exemplars on students' overall performance; and (4) Information analysis report, which provides the corresponding key learning objective, Basic Competency and question intent of each item, as well as an analysis of options of multiple-choice items.

analysis report. They viewed that the corresponding key learning objective, Basic Competency and question intent of each item provided in this report could facilitate teachers' understanding of the rationale of the paper design as well as the connection between Basic Competencies and curriculum, which enable the provision of feedback to curriculum planning and the adjustment of teaching strategies. Views of the principals and teachers reflected that the enhanced school reports can meet the needs of different schools on the whole. Schools and teachers may, on a subject basis, flexibly select appropriate assessment reports to serve different purposes (including reviewing the design of school-based assessments, facilitating curriculum planning, adjusting teaching strategies and rendering learning support, etc.). Furthermore, the arrangement of schools choosing different versions of reports according to the school-based needs can help alleviate schools' concerns about the possible stakes of TSA data.

Strengthening professional support measures

29. Regarding school-based support services, on-site support is provided by EDB to schools participating in the Tryout Study in the light of their school-based needs. Over 80% of the participating schools selected school-based support services that could address their specific needs. Support officers have helped schools to conduct a holistic review of their school-based curricula. TSA data and students' performance in schools are analysed and pre-tests are used to diagnose students' learning needs and set the development focuses with schools. Learning evidence gathered from lesson observation, lesson studies, student interviews, etc. is used to adjust teaching plans and strategies. As shown from questionnaires, all schools consider that professional support has deepened their understanding of how to use the data in the assessment reports and integrate them with internal assessment data to provide feedback to learning and teaching. With respect to students' strengths and weaknesses identified, schools have further conducted a holistic review of their curriculum planning, learning and teaching, and formulated relevant follow up measures. For instance, some schools will focus more on improving students' reading and writing abilities in Chinese Language and English Language. In Mathematics, different schools will adjust their teaching and assessment strategies based on students' performance in individual areas, such as "measurement", to enhance learning effectiveness. These findings show that such support measures, generally well received, can help enhance the assessment literacy of schools.

30. Regarding the development of teaching and assessment materials and the design of learning activities in collaboration with tertiary institutions and schools participating in the Tryout Study, 15% of the participating schools were involved and 20% tried out the WLTS materials and the web-based central assessment item bank for "Student Assessment"

(STAR). Under this support measure, teachers of the participating schools can develop with tertiary institutions and EDB the learning, teaching and assessment materials which tie in with the school-based curriculum. In this way, teachers are furnished with the design concept of teaching materials and techniques, so as to design quality teaching materials and develop school-based curriculum that meet students' learning needs. The response from schools is positive.

Including a questionnaire survey on students' learning attitude and motivation

31. EDB has commissioned the Chinese University of Hong Kong to conduct a questionnaire survey on students' learning attitude and motivation. The report generated includes an analysis using both TSA and non-academic data. Each participating school receives an analysis report on its school data, including students' learning motivation, the relationship between students' socio-economic status and their academic results, etc. Principals and teachers can identify the factors affecting students' learning attitude and motivation by making reference to the data of the questionnaire survey to improve learning and teaching.

Meaningful assignments

32. It is worth-noting that based on the observation of the aforementioned questionnaire survey under the Tryout Study, even students studying at the same level in the same school with similar homework and assessment arrangements, their parents may have very diversified views regarding the homework load. This shows that the perception of the load of exercises and homework involves multiple factors. Meanwhile, the data of the questionnaire survey also reveals that there is no direct relationship between the homework load and the academic performance of junior primary students. The quality of homework is more important than the quantity. Over-drilling would adversely affect motivation for learning.

33. According to the views collected through focus groups for parents from schools participating in the Tryout Study, since there was no drilling nor excessive exercises for TSA in schools, parents were unaware that their children had already taken TSA. Parents expressed that daily lessons were already sufficient for students to handle TSA, they hence had not purchased additional supplementary exercises for their children. Parents also understood that no individual result would be provided under TSA, students were at ease and did not feel that TSA was exerting pressure on them.

Removing stakes and deepening mutual trust

34. In fact, in response to various community concerns, the Committee has made concrete recommendations in the review report submitted in February 2016. EDB has been actively following up related recommendations, including removing TSA from the “Performance Indicators” to alleviate schools’ concerns about the stakes involved in the use of assessment data, enhancing various stakeholders’ (including school sponsoring bodies, school managers, parents, etc.) understanding of “assessment for learning” to ensure the proper and effective use of TSA data. Therefore, the feedback from schools participating in the Tryout Study and views from various stakeholders (including schools and teachers not participating in the Tryout Study, parents, district parent-teacher associations, parent concern groups, etc.) collected through various channels and methods generally showed that the measures are effective in eliminating the stakes involved, reflecting the low-stakes nature of TSA and deepening the mutual trust among stakeholders. EDB will continue to work with various stakeholders in their various roles to ensure the appropriate and full use of TSA data in the promotion of quality education which addresses students’ learning needs, embodies professionalism and is founded on mutual trust in order to serve the functions of Basic Competency Assessments to the fullest extent.

35. The Committee and EDB are following up and reviewing the feedback from the Tryout Study. The Committee would further discuss the TSA arrangements of 2017 and thereafter.

Advice Sought

36. Members are invited to note the latest development on the review of TSA.

Education Bureau
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