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Panel on Education

Background paper prepared by Legislative Council Secretariat

Grant to support the modernisation and development of the Hong Kong Examinations and Assessment Authority's examination systems

Purpose

This paper provides background information on Government funding to the Hong Kong Examinations and Assessment Authority (HKEAA) for the purpose of improving the administration of public examinations. This paper also summarises relevant discussions of the Panel on Education (the Panel) on the subject matter.

HKEAA

2. HKEAA is an independent statutory body established in May 1977 under the Hong Kong Examinations and Assessment Authority Ordinance (Cap. 261). HKEAA was formerly known as the Hong Kong Examinations Authority (HKEA). In July 2002, when the function of HKEA was widened to cover the administration of assessment, its name was changed to HKEAA. The statutory responsibility of HKEAA is to plan and conduct the Hong Kong Certificate of Education Examination (HKCEE) and the Hong Kong Advanced Level Examination. On behalf of overseas examining bodies and local professional bodies, it also administers various examinations leading to academic, professional or practical qualifications, including the London Chamber of Commerce and Industry Examinations, the Associated Board of the Royal Schools of Music Examinations, and the Test of English as a Foreign Language Examination.

3. By virtue of the passage of the Hong Kong Examinations and Assessment Authority (Amendment) Bill 2003 in November 2003, HKEAA is empowered to conduct, on its own or jointly with others, examinations and assessment in or outside Hong Kong.

4. HKEAA is governed by a Council appointed by the Chief Executive. HKEAA Council is responsible for formulating examination policies and monitoring the work of HKEAA. It consists of 17 persons including six ex-officio members. The Education and Manpower Bureau (EMB) is represented on the Council and two of its committees. HKEAA operates on a

self-financing basis and does not receive any recurrent subvention from the Administration. HKEAA is required to submit its annual estimates of income and expenditure (including proposed examination fees), and a programme of its proposed activities to the Administration for approval.

Government funding to support the assessment development, policy and research activities of HKEAA in 2004

5. HKEAA Council commissioned a consultant in 2002 to conduct a strategic review of its functions and capability, and to identify the necessary changes to enable it to better fulfil its roles and functions. The Strategic Review Final Report was completed in May 2003. The Review Report recommended, among other things, that there was an immediate need for the Government to fund the assessment developmental activity over the next five years, given the financial constraints of HKEAA.

6. At its meeting on 15 December 2003, the Panel was consulted on the Administration's proposal of making a one-off grant of \$136.7 million to HKEAA to support its assessment development, policy and research activities for about five years until 2009. According to the Administration, HKEAA proposed to use the funding to conduct assessment development and research activities categorised as follows –

- (a) assessment of development;
- (b) use of technology to improve public examinations;
- (c) long-term regular guarding and comparison of students' standards/performance; and
- (d) strengthening support to teachers.

On the use of technology to improve public examinations, HKEAA proposed to conduct two studies. One study is on the feasibility of on-line marking of scripts and implementation of on-line marking for a few subjects; and the other study is on the feasibility of delivering public assessments on-line to meet the society's need.

7. While the majority of Panel members agreed that there was a need for HKEAA to conduct assessment development and research activities, they queried whether it was necessary to make a one-off grant. These members considered that since a policy decision to implement the proposed "3+3+4" academic structure had yet to be made and the senior secondary curriculum was at an early stage of development, the proposed research activities should be launched and the allocation of fund should be made in phases.

8. The Administration explained to the Panel that the one-off grant would provide HKEAA with the certainty in the planning and development processes for conducting the proposed assessment and research activities. The

development of existing senior secondary curriculum and corresponding assessment mechanism was a necessary and on-going process irrespective of whether the three-year academic structure for senior secondary education would be implemented or not. Moreover, EMB would sign a letter of agreement with HKEAA to specify the ambit of the research activities and assessment of development work to be undertaken by HKEAA and the monitoring mechanism to be applied.

9. The funding proposal was discussed at the meetings of the Finance Committee on 20 February and 27 February 2004. The proposal was approved by the Finance Committee at the latter meeting.

10. The Administration had undertaken to inform the Finance Committee of the progress of the use of the funding through annual reporting. The first annual progress report on the use of the one-off grant covering the period from March 2004 to February 2005 is in **Appendix I**.

Latest review of HKEAA's examination systems and services

Incident of errors relating to HKCEE English Language (Syllabus B) results

11. Following the incident of errors being found in the results of some candidates taking the 2005 HKCEE English Language (Syllabus B) subject, the Panel held a special meeting on 12 September 2005 to discuss with the Administration and HKEAA improvement measures to re-establish public confidence in the administration of public examinations.

Information technology (IT) improvement measures

12. Panel members in general expressed concern about the reliability of the results of public examinations in the future. They stressed that HKEAA must improve its computer systems to enhance efficiency and reliability in the administration of public examinations.

13. The Chairman of HKEAA informed the Panel that HKEAA had established an external Review Committee in March 2005 to conduct a thorough review of its information systems and services which had submitted its final report in August 2005. The report identified a number of ways to improve the examination systems and services, including the establishment of electronic scanning facilities and online marking centres for centralised marking of examination scripts to improve administration of the examinations and reduce the risk of missing scripts.

14. The Chairman and the Secretary General of HKEAA further pointed out that HKEAA Council decided in September 2005 to establish a new IT Committee to act on the findings of the Review Committee and to oversee the reform of HKEAA's IT infrastructure and systems for examination administration. In the long term, HKEAA would aim to modernise its IT infrastructure and to develop a fully automated and integrated examination

system. HKEAA would also implement onscreen marking and real-time processing on a web-based platform to reduce the extent of manual operations.

15. In response to members' enquiry on how the Administration would collaborate with HKEAA to prevent recurrence of similar errors in the future, the Administration pointed out to the Panel that apart from the provision of a one-off grant for HKEAA's assessment development and research activities in 2004, EMB would continue to provide funding support to HKEAA in the implementation of the improvement measures and modernisation of its IT infrastructure and systems.

16. The Chairman of HKEAA explained that HKEAA did not have sufficient reserve to implement the various initiatives to reform the administration of public examinations. Hon LEUNG Kwan-yuen said that Members belonging to the Liberal Party would support financial proposals if they were justified to help speed up the progress of modernising IT infrastructure and systems of HKEAA.

17. Hon LEUNG Kwan-yuen also considered that in the interests of the candidates, HKEAA should continue to explore the use of IT to enhance efficiency and effectiveness in examination administration on an on-going basis. The Chairman of HKEAA said that assessment of students' performance in Chinese Language and English Language would be conducted on the basis of standards-referencing for the 2007 HKCEE. This would prepare the way for the development of systems for processing the results of the new public examinations for the Hong Kong Diploma of Secondary Education in the context of the new senior secondary education reform. In the long term, online marking could advance the announcement of HKCEE results by two to three weeks.

Implementation schedule

18. Some members asked whether HKEAA had ascertained the need to implement electronic scanning for scripts, on-screen marking and automation of processes using real-time processing on a web-based platform. They considered that HKEAA should examine the time taken and costs for implementing electronic scanning of the scripts, and conduct the necessary quality assurance and risks assessments before the adoption of the new systems for examination administration.

19. The Secretary General of HKEAA stressed that HKEAA attached utmost importance to running reliable examination results, and would implement the new systems only after full assurance of quality and comprehensive assessment of risks. The scanning of scripts for the 2006 HKCEE was the first step towards on-screen and centralised marking of selected subjects in 2007. HKEAA would develop the new computer systems for on-line marking of the Chinese Language and English Language papers starting from the 2007 HKCEE, and extend the use of the systems to other subjects on a progressive basis.

20. The Secretary General of HKEAA also pointed out that the development of the new computer systems for the processing of examination results was underway. HKEAA would carefully plan the schedule of implementation, in particular the provision of sufficient training to markers on the operation of the scanning and computer systems, during September to November 2005. HKEAA would make reference to the experience and applications of on-line marking in other jurisdictions including the United Kingdom and the Mainland in its development of tailor-made systems for processing scripts.

21. Hon Patrick LAU asked about the impact of implementing on-line marking on the design and format of questions in public examinations. He considered that the academic attainments of students at senior secondary levels should be assessed by way of answering both multiple choice and open-ended questions. The Chairman of HKEAA said that the prevailing international trend was to incorporate more open-ended questions for assessment of senior secondary students' academic attainments in different subjects. In line with the spirit of the education reform, HKEAA would also be adopting an increasing number of open-ended questions in public examinations.

Relevant documents

22. Members may wish to refer to the minutes of the relevant meetings of the Panel on Education and the Finance Committee, as well as the relevant papers provided by the Administration for these meetings as set out in **Appendix II**. Soft copies of these documents are available at the website of the Legislative Council at <http://www.legco.gov.hk>.

Council Business Division 2
Legislative Council Secretariat
11 November 2005

NOTE FOR FINANCE COMMITTEE

First Annual Progress Report of the Use of the Grant to Support the Assessment Development and Research Activities of the Hong Kong Examinations and Assessment Authority

PURPOSE

This paper informs Members of the progress of the use of the one-off grant to support the assessment development and research activities of the Hong Kong Examinations and Assessment Authority (HKEAA). This is the first report covering the period from March 2004 to February 2005.

BACKGROUND

2. On 27 February 2004, Members approved vide FCR(2003-04)65 a new commitment of \$136.7 million for providing a one-off grant to support the assessment development and research activities of HKEAA for five years from 2004 to 2009 (“the grant”). The Administration undertook to inform Members of the progress of the use of the funding through annual reporting.

3. The grant covers four categories of activities, namely –
- (a) assessment development;
 - (b) use of technology to improve public examinations;
 - (c) long-term regular guarding and comparison of students’ standards and performance; and
 - (d) strengthening support to teachers.

4. At the time when we sought funding approval from the Finance Committee, we noted that our public examination and assessment system needed improvements and the grant would be necessary, regardless of the way forward of

the proposed new academic structure for senior secondary education and higher education. The improvement measures of HKEAA could accommodate the necessary changes to pave way for the implementation of the new academic structure. Now that the Government has decided to implement the new academic structure starting from the 2009/10 school year, HKEAA will adjust the improvement measures accordingly to tie in with the implementation of the new academic structure.

MONITORING THE USE OF THE GRANT

5. In March 2004, the Education and Manpower Bureau signed a Letter of Agreement with HKEAA with details consistent with the proposal set out in FCR(2003-04)65. The letter specified the ambit of the assessment development and research activities to be undertaken by HKEAA. HKEAA has opened a separate bank account for the grant, kept separate accounts of the income and expenditure relating to the grant, and submitted to the Government separate audited financial statements of the grant as at end of August 2004.

6. Monitoring of the use of the grant has been conducted in accordance with the existing governance structure of HKEAA, which comprises the HKEAA Council and the three committees/boards under it, namely the Finance and General Purposes Committee (F&GPC), the Research Committee and School Examinations Board (SEB). The Research Committee and the SEB approve the technical proposals of the projects in their respective areas, as appropriate; and recommend reports of projects for approval by the HKEAA Council. The F&GPC monitors the use of the grant through regular reports of the financial position of the grant prepared by the HKEAA Secretariat. The F&GPC also recommends the master budget and annual audited financial statements of the grant for approval by the HKEAA Council.

PROGRESS OF THE USE OF THE GRANT

7. HKEAA reported the progress of the use of the grant as follows –

- (a) the progress of the activities supported by the grant as at 28 February 2005 was in line with the master timetable of the activities as set out in the Enclosure; and
- (b) the expenditure and commitment position of the grant as at 28 February 2005 as set out in the table below.

Encl.

/Category

Category	(1) Projected required funding as at 27 February 2004	(2) Actual expenditure as at 28 February 2005	(3) Amount Committed as at 28 February 2005	(4) Balance as at 28 February 2005 = (1) – (2) – (3)
	(\$ million)	(\$ million)	(\$ million)	(\$ million)
(A) Assessment development	113.3	1.5	11.7	100.1
(B) Use of technology to improve public examinations	8.7	-	2.2	6.5
(C) Long-term regular guarding and comparison of students' standards and performance	11.0	0.6	0.1	10.3
(D) Strengthening support to teachers	11.8	0.3	1.3	10.2
Sub-total	144.8	2.4	15.3	127.1
Less: Estimated interest to be generated from the grant	(8.1)	(1.9) ^{Note}	-	(6.2)
Amount of approved grant	136.7	0.5	15.3	120.9

Note : \$1.9 million is the actual interest generated from the grant as at 28 February 2005.

8. As shown in the above table, about 12% of the total of the approved grant and estimated interest to be generated from the grant has been spent or committed. Spending of the grant since its approval is in accordance with the original plan. HKEAA expected that the rate of spending would increase commensurate with the various activities coming to full speed.

Activities	Quarters of the Year																				
	2004				2005				2006				2007				2008				2009
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1
(B) Use of Technology to improve the public examinations																					
B1 On-line marking – pilot study																					
B2 On-line delivery of public examinations – study																					
(C) Long-term regular guarding and comparison of students' standards and performance																					
C1 Introduction of standard benchmarking tests (selected subjects)																					
C2 Studies to compare the performance of candidates in public examinations (selected subjects) across years																					
C3 Comparability study between local and overseas English language examinations																					
(D) Strengthening the support to teachers																					
D1 Quantitative and qualitative feedback to schools – survey and pilot study																					
D2 Assessment training for teachers																					

**Relevant documents on
grants to support the Hong Kong Examinations and Assessment Authority
in the development and updating of its information technology infrastructure,
establishment of scanning facilities and online marking centres,
and the automation of examination operations**

Date of meeting	Meeting	Minutes/Paper	LC Paper No.
15.12.03	Panel on Education	Minutes of meeting	CB(2)1102/03-04
		Paper entitled “Government Funding to Support the Assessment Development, Policy and Research Activities of the Hong Kong Examinations and Assessment Authority”	CB(2)634/03-04(01)
20.2.04	Finance Committee	Minutes of meeting	FC63/03-04
		The Administration’s paper entitled “Grant to Support the Assessment Development and Research Activities of the Hong Kong Examinations and Assessment Authority”	FCR(2003-04)58
27.2.04	Finance Committee	Minutes of meeting	FC72/03-04
		The Administration’s paper entitled “Grant to Support the Assessment Development and Research Activities of the Hong Kong Examinations and Assessment Authority”	FCR(2003-04)65
		The Administration’s paper entitled “First Annual Progress Report of the Use of the Grant to Support the Assessment Development and Research Activities of the Hong Kong Examinations and Assessment Authority”	FCRI(2005-06)6

Date of meeting	Meeting	Minutes/Paper	LC Paper No.
12.9.05	Panel on Education	Minutes of meeting	CB(2)228/05-06
		Paper entitled "Review of the incident involving misreporting of 2005 HKCEE English Language (Syllabus B) Oral paper results"	CB(2)2538/04-05(01)

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