

**For information
on 31 January 2008**

LEGCO PANEL ON EDUCATION

The Third Strategy on Information Technology in Education

Supplementary Information on Resources Planning and Redeployment

Introduction

At the Panel meeting on 14 January 2008, Members raised questions about the need for an IT co-ordinator post in the school establishment; the provision of adequate resources for schools to offer reasonable pay package for school IT technicians; and the measures to bridge the digital divide among students.

The changing circumstances

2. Information Technology (IT) in Education is about effective integration of IT into learning and teaching to improve learning outcomes. In the past, the Government has been investing substantially in hardware and software to equip schools with the necessary IT infrastructure to integrate IT into education. We believe that it is about time to adjust our strategy to focus on effective resources planning and critical evaluation of what is really needed to improve learning outcomes in the light of recent trends of development in IT in education. As pointed out in the Consultation Document on the Third Strategy on IT in Education (Consultation Document), one important trend shaping the learning environment is the increasing use of web-based environment for collaboration and sharing (or “Web 2.0 applications”) which has resulted in different resources implications than was the case in the first two strategies.

3. In 2002, UNESCO coined the term, Open Educational Resources (OER). OER, as a web-based movement, refers to the “open provision of educational resources enabled by information and communication technologies, for consultation, use and adaptation by a community of users for non-commercial purposes”. In 2004, a critical mass of open educational resources was yet to be developed. The Government still had to invest heavily in developing digital resources for learning

under the Second Strategy on IT in Education.

4. At present, open educational resources for different levels, from kindergarten to university, have been readily available. This significant change has two strategic implications. First, we need to assist teachers in selecting and integrating the most appropriate resources into learning and teaching to support the curriculum. Second, effective use of open resources materials means financial resources originally provided for schools to procure digital learning resources can be redeployed to other areas to enhance the effectiveness of IT in improving students' learning outcomes. That explains why there have been recent revived emphases on flexibility in using IT grants by schools and effective resources planning by schools for IT in education. In many jurisdictions which have over the past decade invested heavily in hardware and teaching training, a shift has occurred towards more school-based planning as a requirement so that IT grants are used more effectively.

The changing strategic focuses

5. Under the Third Strategy on IT in Education, we plan to develop a depository of teaching modules with appropriate digital resources, including open source materials and acquired resources, to alleviate teachers' workload in integrating IT into education (paragraphs 22-23 of the Consultation Document). We propose to collaborate with local tertiary institutions to develop a model school-based IT in education roadmap for schools' reference and organise workshops on how a school can assess its current situation and develop and implement the roadmap (paragraph 28 of the Consultation Document). We endeavour to set up a central technical support team, comprising seconded teachers experienced in embedding IT in learning and teaching, to assist schools and teachers to overcome technical problems in implementing school-based IT in education development plans (paragraph 32 of the Consultation Document). We envisage that these outside help will alleviate the workload of schools in resources planning and enable schools to use IT to improve students' learning outcomes more cost-effectively.

6. Our responses to Members' questions related to the provision and use of resources for IT in education in schools are appended below in the context of the changing circumstances and changing strategic focuses explained above.

Resources for schools to cope with IT co-ordination tasks

7. In the initial development stage, there may be a need for a teacher in a school to assume the co-ordinating role of building up the most suitable IT infrastructure to support the learning programme, and support the principal in overseeing the integration of IT into learning and teaching activities. The co-ordinating work should diminish gradually in later stages as the infrastructure has been put in place and more teachers and subject panels take responsibility. As and when additional co-ordinating work arises from new initiatives, schools can use the recurrent Capacity Enhancement Grant (CEG) flexibly to assist the concerned teacher(s) to cope with the changing workload. This is stated clearly in the ambit of CEG:

“the basic provision of CEG in general provides the necessary funds to schools to relieve teachers’ workload so that teachers will have enhanced capacity to concentrate on the following three critical tasks in the education reform -

- (i) curriculum development, **including the integration of information technology in teaching;**
- (ii) enhancing students’ language proficiency; and
- (iii) coping with the diverse and special learning needs of students with varied abilities, ranging from the gifted ones to those with learning difficulties.”

8. Along the spirit of school-based management, we aim to allow flexibility for each individual school to decide how these resources are to be deployed to meet the workload arising from IT co-ordination among other priorities. Such flexibility in resources deployment is important because the intensity of IT co-ordination in a school changes in different stages of development of integration of IT into education and varies according to the priority of different schools.

9. For the 2007/08 school year, the basic provisions of CEG for primary and secondary schools (i.e. excluding the time-limited funding) are:

Primary schools of 24 classes or more	\$533,482
<i>(a small primary school of 15 classes receives \$343,618)</i>	
Secondary schools of 24 classes or more	\$436,476

Resources for technical support

10. The purpose of the Composite IT Grant (CITG) is to meet schools' recurrent IT-related expenses including IT consumables, Internet connection services, digital learning and teaching resources, and technical services. We have merged different IT-related grants into the CITG to provide schools with greater flexibility in managing their own resources according to their needs and to reduce administrative work. The rates of the CITG are subject to annual adjustment according to the movement of the Composite Consumer Price Index (CCPI). For the 2007/08 school year, primary schools of 19-24 classes receive a CITG of about \$250,000 while secondary schools of 25 classes receive \$290,000. The median salary for IT technical personnel whose job requirement is comparable to that of a school IT technician is \$11,295 per month according to the Census and Statistics Department (i.e. about half of the CITG will be used for technical services in an average sized school).

11. In the light of changing technologies and practices (e.g. higher awareness of environmental-friendly practices and more intensive use of school intranet for communication with parents and students), spending on IT consumables such as ink cartridge, paper and CD has generally been reduced. As we are advancing from the e-learning environment to c-learning environment in which quality open educational resources are increasingly abundant and teachers are collaborating and sharing resources more efficiently and effectively, expenses on digital teaching and learning resources should be decreasing. As a result, schools have room for redeployment of resources to meet their changing needs, such as pay adjustment to retain IT technicians.

12. Moreover, like other jurisdictions such as the UK and Australia¹ where there are block grants and designated IT grant, schools in Hong Kong are expected to use CITG and other block grants to support the integration of IT into education according to their own needs and priorities. According to schools' block grants spending record, the majority of schools are able to redeploy uncommitted resources from block grants to meet IT expenses if necessary.

¹ See funding for ICT in education in the UK at the website of teachernet at <http://www.teachernet.gov.uk/wholeschool/ictis/funding/>. See the use of "School ICT Grant" at the website of the Department of Education, Training and the Arts of Queensland, Australia at http://education.qld.gov.au/smartclassrooms/strategy/si_grants.html. It is stated that "schools will need to allocate sufficient funds from the School ICT Grant (along with other internal and external resources) to support the integration of ICT into everyday practice".

Bridging digital divide among students

13. According to a household survey on the usage and penetration of information technology in Hong Kong conducted by the Census and Statistics Department from July to September 2007, about 3.3% (or 25,500) primary and secondary school students aged 10 and over did not have a computer at home. There is no further breakdown by districts, school types and socio-economic background (e.g. ethnic origins) of students. Since a household may have more than one primary or secondary student aged 10 and over, the estimated number of households with a primary or secondary student aged 10 and over but without a computer is 20,300. The reasons for not having a computer at home quoted by the respondents to the survey are listed below:

Reasons (multiple answers were allowed)	No. of households	%
Cost too high	8 400	41.6
No specific application / lack of interest in using a computer	6 300	31.1
Had access to a computer at other places	5 700	27.9
Did not know how to use a computer	3 600	17.5
Already have plan to purchase a computer	1 900	9.6
Avoid children spending too much time on computer	1 700	8.3
Overall	20 300	

14. As explained in the Panel paper LC Paper No. CB(2)766/07-08(07) for the meeting on 14 January 2008, the Education Bureau will collaborate with the Environmental Protection Department to continue the computer recycling scheme to distribute refurbished computers to needy students. We will step up our communication effort through schools to ensure needy students can benefit from the scheme. Schools are already using the CITG to make arrangements to open up rooms with access to computers after school for those students who do not want a computer at home for any reason. We have also proposed to collaborate with voluntary organisations to raise parents' information literacy and awareness of the role of IT in the emerging learning environment.

Way forward

15. Notwithstanding our strategic focuses on assisting schools in effective resources planning and redeployment according to individual schools' own priorities,

we will constantly review the amount of CITG in the light of changing circumstances. Subject to Members' views, we will seek Finance Committee's funding approval at its meeting on 22 February 2008 to implement the Strategy.

Education Bureau
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