

## **ITEM FOR FINANCE COMMITTEE**

**HEAD 156 – GOVERNMENT SECRETARIAT :  
EDUCATION AND MANPOWER BUREAU  
Subhead 700 General non-recurrent  
Item 914 Implementation of information technology in education strategy**

Members are invited to approve an increase in commitment from \$40.2 million by \$124.3 million to \$164.5 million under Head 156 Government Secretariat: Education and Manpower Bureau Subhead 700 General non-recurrent Item 914 Implementation of information technology in education strategy for sustaining the implementation of various initiatives under the Second Information Technology in Education Strategy.

### **PROBLEM**

We need to provide further funding for sustaining the implementation of various initiatives under the Second Information Technology (IT) in Education Strategy (the Second Strategy) in the next two school years commencing September 2005 with a view to equipping our younger generation to face up to the challenge of an increasingly knowledge-based and competitive world of tomorrow.

### **PROPOSAL**

2. The Secretary for Education and Manpower proposes to increase the non-recurrent commitment for implementation of IT in education strategy from \$40.2 million by \$124.3 million to \$164.5 million for the implementation of various initiatives to further embed IT in learning and teaching in the next two school years.

**/JUSTIFICATION .....**

**JUSTIFICATION***The Second IT in Education Strategy*

3. After consulting the Legislative Council Panel on Education in June 2004, we issued a policy document entitled “Empowering Learning and Teaching with Information Technology” in July 2004. The Finance Committee (FC) approved in July 2004 vide FCR(2004-05)27 a commitment of \$171.5 million under the Capital Account for the replacement and upgrading of IT facilities in public sector schools and a non-recurrent commitment of \$40.2 million under the Operating Account for the implementation of various initiatives to embed IT in learning and teaching.

Encl. 1 4. The Second Strategy as outlined in the policy document and supported by the two commitments was launched in September 2004. A summary of the progress made so far is at Enclosure 1.

Encl. 2 5. Having regard to the latest needs of students, teachers and schools as well as feedback upon the progress so far, we plan to continue with existing measures and commence a series of new measures (including training, development and dissemination of educational resources; research and development studies; enhancing support and organising activities) in the coming two school years so as to sustain the implementation of the Second Strategy. The beneficiaries will include all public sector schools. An increase in non-recurrent expenditure of \$124.3 million will be required. Details of the measures are set out in paragraph 6 below. A table setting out the items approved for implementation in the 2004/05 school year, their updated spending pattern, juxtaposed against the items to be implemented in the next two school years is at Enclosure 2.

*Initiatives under the Second Strategy*

6. The measures in the next phase to support the goals of the Second Strategy in the next two school years are set out below –

(I) Empowering Learners with IT

(a) *Programmes to promote the use of IT in learning among students and to cultivate students’ global perspective*

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To encourage students to go beyond textbooks to acquire knowledge, to observe and explore the world outside schools, we plan to collaborate with Non-Governmental Organisations (NGOs), the private sector and overseas communities in organising student programmes to promote the use of IT in learning among students and cultivate students' global perspective. We estimate the funding requirement for the programme activities, venue rentals, promotion, dissemination of good practices in the use of IT in education and related expenses to be about \$2 million.

(II) Empowering Teachers with IT

*(a) Revamping the existing training framework for teachers*

We plan to revamp the existing training framework for teachers on the use of IT in education and to develop professional development programmes for teachers geared to the pedagogical use of IT in the learning and teaching of different Key Learning Areas or subject areas. We will commission local tertiary institution(s) to conduct a study to identify the professional development needs to enable teachers to focus on ways to facilitate exploratory learning, guide collaborative enquiries, provide resources, administer learning tasks, tailor teaching to students' varied abilities and conduct assessment. Furthermore, the commissioned tertiary institution(s) will be tasked to design and develop training programmes to cater for the needs of our teachers on the use of IT in education. We estimate the funding requirement for developing the new framework and programmes to be about \$5.8 million.

*(b) To enhance the "Train the trainers" scheme*

We will continue to bring the state-of-the-art technology to teachers through the "Train the trainers" scheme, riding on the innovation and strengths of the private sector. We estimate the funding requirement for the training materials, software licenses and other related expenses in the coming two school years to be about \$1 million.

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(c) *Flagship conference on IT in education*

To enhance sharing of information and dissemination of good practices among teachers, we plan to organise jointly with tertiary institutions and the private sector a flagship conference on IT in education in early 2006. We estimate the funding requirement for this initiative to be about \$2.5 million, covering expenditure on programme, venues, speakers, publications, web-casting, promotion, hire of services to organise the event and other logistical arrangements.

(d) *Incentive schemes for collaboration among schools and relevant organisations*

To further strengthen the sharing of experiences among teachers, we will support incentive schemes to encourage collaboration among schools and relevant organisations in harnessing IT in learning and teaching. We plan to support about 20 partnership projects from interested schools with funding of about \$0.5 million or less per project, covering the expenditure on professional / academic support services to be rendered by tertiary institutions, purchase of technology products, employment of assistant(s) to offload the work of participating teacher(s) with a view to exploring efficient ways of utilising resources, enhancing training and promoting students' learning with IT. The estimated expenditure for this initiative is about \$10 million.

(III) Enhancing School Leadership for the Knowledge Age

(a) *Training for school principals*

We have provided \$3 million to develop and pilot the IT leadership training for school principals programme in the 2004/05 school year. The training is useful in enhancing principals' knowledge, skills and understanding of issues and impact of learning and teaching with IT. In the coming two school years, we plan to roll out the programme as a core training for all heads of schools. We estimate that the expenditure for the provision of the required training is about \$4 million.

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(b) *Strengthening “Centres of Excellence on IT in Education” network*

To support schools on planning and implementing IT in education, we aim to continue our strategy to strengthen the role of the “Centres of Excellence on IT in Education”<sup>1</sup> network. In this regard, we have provided \$0.5 million in the 2004/05 school year and we plan to further disburse \$1 million to the Centres in the coming two school years for enhancing their activities, publications, promotion, and experience and knowledge sharing efforts. The funding will cover the purchase of consumables and hire of services pertinent to such programmes and activities.

(c) *Assessment tools for schools’ self-evaluation*

To assist schools to conduct self-evaluation on the progress / performance of their implementation of IT in education, we have established, through the engagement of the service of a tertiary institution with approved funding of \$0.3 million, a Self-Evaluation Platform on IT in Education for use by schools since March 2005. Based on our internal assessments and the feedback from users, we plan to provide additional funding of \$0.5 million for some enhancement items of the system.

(IV) Enriching Digital Resources for Learning

(a) *Incentive scheme for developing instructional software*

We plan to launch the incentive scheme in the 2006/07 school year to encourage the turning of textbooks into e-learning materials and the development of quality instructional software. The scheme will mainly be public-private ventures involving textbook publishers, tertiary institutions and IT education media companies. We plan to launch the scheme with the assistance of the Hong Kong Education City (HKEdCity) which serves as the Education and Manpower Bureau (EMB)’s executive arm and strategic partner. Under this scheme, the Government will finance part of the cost of developing the electronic materials and resources. We estimate the expenditure to be \$5 million.

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<sup>1</sup> Under the first strategy on IT in education, we have established a regional network of 20 IT advanced primary and secondary schools as “Centres of Excellence on IT in Education”. These schools have two half-seconded teachers to provide support to schools which are less ready on the use of IT in learning and teaching. These seconded teachers pay regular visits to schools to provide technical and pedagogical advice where appropriate and organise activities like seminars to facilitate sharing of experience. The arrangement has been proven to be effective in the implementation of the first strategy on IT in education

(b) *Production and adaptation of resource materials*

To enhance the production and adaptation of resource materials, we need to continue our strategy to strengthen HKEdCity's role as a hub of educational resources and information in the next two school years by enhancing the production of resource materials, as well as licensing and adapting the contents of quality overseas e-learning materials for local use. HKEdCity will be tasked to step up the publicity and dissemination of developed and adapted works posted onto its website. Further to the \$3.5 million already spent in the 2004/05 school year, we estimate the additional expenditure in the coming two school years to be \$5 million.

(c) *"Electronic learning credits" scheme*

To encourage schools to acquire relevant electronic and interactive teaching and learning materials, we have disbursed grants (at \$10 per student) to schools for purchase of such contents as well as curriculum-specific computer peripherals for a period of 18 months to enhance the integration of IT in learning and teaching. This grant (on average about \$7,000 per school, totalling \$8.3 million) can either enable a school to subscribe a web-based resource or to purchase copies of one/two educational software package(s) for a particular subject. In view of the increasing demand for up-to-date digital resources to support the curriculum and to give further incentive for the digital learning resources market to turn out quality resources to widen consumers' choice, we plan to extend the scheme in the 2006/07 school year and provide further grants to schools at \$20 per student to facilitate schools to acquire resources. The total funding required is around \$16.6 million.

(V) Improving IT Infrastructure and Pioneering Pedagogy Using Technology

(a) *Encouraging innovation and trials of new information technologies and equipment that may enhance learning and teaching*

To encourage innovation and trials of new technology and equipment that may enhance learning and teaching, we have

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launched a pilot scheme (at an expenditure of \$1 million) to identify and disseminate leading practice in the use of interactive whiteboards in teaching and to explore educational uses that add significant value to the learning process. We will continue to launch other pilot schemes in future, such as using video conferencing in learning and teaching, using mobile technology in collaborative learning and cultivating students' global perspective. The cost of the pilot schemes is estimated to be \$4 million, covering costs on equipment and facilities as well as research.

(VI) Providing Continuous Research and Development

*(a) Identifying and developing exemplars*

We will continue to enrich the community database for consolidation and dissemination of good practices on the use of IT in education with exemplars. Further to the \$0.2 million already spent in the 2004/05 school year, we plan to allocate \$6 million in the next two school years to cover expenses on maintaining database and system, service contracts to provide advisory service and training for participating schools, and funds to the "Centres of Excellence" to assist in distilling/disseminating good practices from schools.

*(b) Studies on the Second Strategy*

To monitor and evaluate the effectiveness of the implementation of the IT in Education strategy, we plan to collect data from schools regularly and undertake studies in this regard with emphasis on the impact of IT on students' learning outcomes in selected Key Learning Areas. The results of the studies will provide pointers for adjusting our direction and charting our way forward beyond the 2006/07 school year. The funding required is around \$2.6 million.

(VII) Promoting Community-wide Support and Community Building

*(a) Programmes for Parent-Teacher Associations*

Further to the \$1.8 million already spent in the 2004/05 school year, we will continue to disburse funds to schools to facilitate the

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organisation of more parental programmes to help them handle the ethical, legal and health issues related to the use of IT by their children. The purpose is to actively involve parents in the promotion of IT in education. We will earmark a total of \$4 million in the next two school years for this.

(b) *Collaborative schemes with the private sector and NGOs*

We plan to sustain our efforts in collaboration with the private sector and NGOs in furthering the cause of IT in education through various programmes. These include the operation of the call centre service to answer queries and problems encountered by students and teachers, to provide guidance on administration and maintenance of computer network, IT security, skill sets and development required for IT technical staff, etc., as well as the launching of an “Adopt a School” campaign<sup>2</sup> by the private sector to assist schools’ transformation into innovative learning institutions. Further to the \$0.8 million already spent in the 2004/05 school year, the estimated expenditure for the above services in the coming two school years is around \$5 million.

(c) *“Computer recycling” and donations to help needy students*

To help needy students from families which are not financially capable to acquire computers for use, a large-scale campaign will be launched in the next two school years to encourage donations of old or replaced computers from schools as well as the private and public sectors for a “computer recycling” project. We plan to deliver around 20 000 sets of recycled computers by phases starting from January 2006 bundled with necessary software, Internet access service and technical support service for use by students up to the end of the 2006/07 school year. We will conduct a review within the project period for charting the way forward. Under this project, schools can either give such computers to needy students directly, loan the machines to them or have the computers installed in school for shared use. As far as practicable, basic IT skills

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<sup>2</sup> Under the proposed “Adopt a School” campaign, a private sector company may select a specific school and offer targeted assistance to the “adopted” school in IT in education. The form of assistance may not be confined to donations in money, but may also include support in kind, such as technical advice on IT infrastructure, call centre support services, voluntary work by the staff, and any other innovative form of partnerships.



training will be provided for the parents concerned prior to the allocation of these computers, to enable proper parental guidance on the use of computers in these underprivileged families. We will solicit, as far as possible, community support and corporate sponsorship and we will collaborate with NGOs, social welfare organisations, Parent-Teacher Associations and other parties on the project. To achieve these tasks, we propose to allocate a total of \$49.3 million for the project. The budget will mainly cover the cost of sourcing, repairing and upgrading old computers, provision of software, Internet access and technical support/maintenance services up to the end of the 2006/07 school year, IT training for parents and other related costs. Details of the project and breakdown of the estimated expenditure are at Enclosure 3.

Encl. 3

## FINANCIAL IMPLICATIONS

7. The proposal will require additional non-recurrent expenditure totalling \$124.3 million. It will span two school years commencing September 2005 with the cash flow spreading across over three financial years from 2005-06 to 2007-08. The estimated cash flow requirements in the respective financial years are set out below –

	Financial Year			Total
	2005-06	2006-07	2007-08	
	(\$ million)			
(I) Empowering learners with IT	–	1.0	1.0	2.0
(II) Empowering teachers with IT	9.1	8.4	1.8	19.3
(III) Enhancing school leadership for the knowledge age	1.9	2.5	1.1	5.5
(IV) Enriching digital resources for learning	–	25.1	1.5	26.6
(V) Improving IT infrastructure and pioneering pedagogy using technology	1.0	2.0	1.0	4.0
(VI) Providing continuous research and development	2.2	4.3	2.1	8.6
(VII) Promoting community-wide support and community building	12.7	35.4	10.2	58.3
<b>Total :</b>	<b>26.9</b>	<b>78.7</b>	<b>18.7</b>	<b>124.3</b>

8. If Members approve the present proposal, we will provide for funds out of the approved commitment to meet the cash flow required in the relevant financial years. For 2005-06, we have earmarked the funding required in the draft Estimates. The present proposal will not lead to additional recurrent costs.

## **BACKGROUND INFORMATION**

9. In 1998, the HKSAR Government announced the 5-year strategy on IT in education and issued the policy document “Information Technology for Learning in a New Era: Five-year Strategy – 1998/99 to 2002/03”. The vision was to link up our students with the vast network world of knowledge, and to develop our students’ attitude and capability for independent and lifelong learning. The FC approved in December 1997 vide FCR(97-98)73 a commitment of \$2,583.210 million and in January 1999 vide FCR(98-99)71 an increase in commitment by \$341.473 million to \$2,924.683 million for enhancement of use of IT in school education.

10. After the successful completion of the first strategy in 2002-03, EMB released the consultation document “Information Technology in Education – Way Forward” in March 2004 to collect public views and to chart the next strategy of using IT in school education. The new strategy is to sustain and enhance the momentum of IT in education and to further embed IT in learning and teaching. After consulting the Legislative Council Panel on Education in June 2004, the Administration issued a policy document entitled “Empowering Learning and Teaching with Information Technology” in July 2004. It encompasses seven strategic goals –

- (I) empowering learners with IT;
- (II) empowering teachers with IT;
- (III) enhancing school leadership for the knowledge age;
- (IV) enriching digital resources for learning;
- (V) improving IT infrastructure and pioneering pedagogy using technology;
- (VI) providing continuous research and development; and
- (VII) promoting community-wide support and community building.

The FC approved in July 2004 vide FCR(2004-05)27 a commitment of \$171.5 million under the Capital Account for the replacement and upgrading of IT facilities in public sector schools and a non-recurrent commitment of \$40.2 million under the Operating Account for the implementation of various initiatives to embed IT in learning and teaching.

11. We consulted the Legislative Council Panel on Education on the proposal in paragraph 6 above at its meeting on 9 May 2005 and the Panel did not raise any objection to the proposal. Some Members expressed concerns about the “computer recycling” project and requested EMB to provide more detailed information. In this connection, we have reviewed this initiative and provided more details at paragraph 6 (VII) (c) above and in Enclosure 3 of this paper.

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Education and Manpower Bureau  
June 2005

**Major Measures of the  
Second Information Technology (IT) in Education Strategy  
Implemented in the 2004-05 Financial Year**

*(I) Empowering Learners with IT*

A team of consultants has developed a draft Information Literacy framework for students to give a clearer picture on the learning targets of using IT in education. To enable students to engage in an empowering mode of learning, the Education and Manpower Bureau (EMB) have disbursed funds to schools to assist them to set up their own e-learning platforms in March 2005.

*(II) Empowering Teachers with IT*

2. EMB turned two of the existing “Centres of Excellence on IT in Education” into “Learning Centres” in October 2004 to facilitate teachers to develop, share and disseminate innovative learning and teaching methods using IT. The Hong Kong Education City has developed an online training platform with instructional software for teachers. EMB continues to organise IT-related refresher training courses as well as experience sharing workshops for teachers.

*(III) Enhancing School Leadership for the Knowledge Age*

3. EMB has commissioned a local tertiary institution to develop an e-leadership training programme, and has commenced the pilot training programme for principals in April 2005. Starting from the 2004/05 school year, EMB has been disbursing to schools, a Composite Information Technology Grant which gives schools flexibility to allocate resources to support school-based IT plans by merging related recurrent IT-related grants.

*(IV) Enriching Digital Resources for Learning*

4. EMB has disbursed funding under the “electronic learning credits” scheme to schools in March 2005 to help them acquire relevant electronic and interactive learning materials as well as curriculum-specific computer peripherals to enhance the integration of IT in learning and teaching.

*(V) Improving IT Infrastructure and Pioneering Pedagogy Using IT*

5. EMB has provided funding to public sector schools to replace and upgrade schools' IT infrastructure. Support from the Quality Education Fund in the form of matching fund (in the order of \$180 million) will be available to schools starting in the summer of 2005. Besides, EMB selected ten schools with various degrees of IT maturity in November 2004 to participate in a pilot project in the use of interactive whiteboard to enhance learning and teaching.

*(VI) Providing Continuous Research and Development*

6. EMB has started a pilot project on using innovative community database for consolidation and dissemination of good practices in January 2005.

*(VII) Promoting Community-wide Support and Community Building*

7. EMB has disbursed funds to schools in March 2005 to allow the latter to help parents ensure students understand the ethical, legal and health issues involved in using IT. In partnership with the Hong Kong Computer Society, EMB launched a "Call Service Centre" project in February 2005 to answer queries and problems from students and teachers. Besides, in collaboration with Non-governmental Organisations, Hong Kong Association of Computer Education, relevant Parent-Teacher Associations and other parties, EMB is planning a "computer recycling" project to help needy students to bridge the digital divide.

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**Enclosure 2 to FCR(2005-06)14**

**Second Information Technology (IT) in Education Strategy  
Measures approved by the Finance Committee for implementation  
in the 2004/05 school year  
and planned measures in the following two school years**

<b>Implementation Measures</b>	<b>Original Estimate</b>	<b>Updated Estimate</b>	<b>Planned Measures</b>	
	<b>2004/05 school year (\$M)</b>	<b>2004/05 school year (\$M)</b>	<b>2005/06 school year (\$M)</b>	<b>2006/07 school year (\$M)</b>
<b>1. Empowering Learners with IT</b>				
<ul style="list-style-type: none"> <li>To draw up an Information Literacy framework for primary and secondary students based on the IT Learning Targets for primary and secondary education</li> </ul>	2.0	1.7	-	-
<ul style="list-style-type: none"> <li>To enhance partnership with NGOs, the private sector and overseas communities on programmes to promote the use of IT in learning among students and to cultivate students' global perspective</li> </ul>	-	-	1.0	1.0
<ul style="list-style-type: none"> <li>To support research and evaluation on pedagogically appropriate e-learning platforms; to help schools to set up such platforms, provide teacher training and enhance courseware</li> </ul>	9.0	7.4	-	-
<b>2. Empowering Teachers with IT</b>				
<ul style="list-style-type: none"> <li>To revamp the existing training framework for teachers on the use of IT in education</li> </ul>	-	-	2.0	3.8
<ul style="list-style-type: none"> <li>To enhance the "Train the trainers" scheme</li> </ul>	-	-	0.5	0.5
<ul style="list-style-type: none"> <li>HKEdCity to develop an online training platform and more instructional software for teachers</li> <li>HKEdCity to set up mutually supportive teacher communities to undertake and share pedagogical innovations through online and face-to-face contacts</li> </ul>	1.5	1.5	-	-

Implementation Measures	Original Estimate	Updated Estimate	Planned Measures	
	2004/05 school year (\$M)	2004/05 school year (\$M)	2005/06 school year (\$M)	2006/07 school year (\$M)
<ul style="list-style-type: none"> <li>To organise jointly with tertiary educators, the private sector and the school sector, flagship conference on IT in education to enhance sharing of information and of good practices</li> </ul>	-	-	2.5	-
<ul style="list-style-type: none"> <li>To conceive incentive schemes for collaboration amongst schools and relevant organisations in harnessing IT in learning and teaching</li> </ul>	-	-	5.0	5.0
<ul style="list-style-type: none"> <li>To transform at least two of the existing “Centres of Excellence” to become “Learning Centres” that aims to facilitate teachers to develop, share and disseminate innovative learning and teaching methods using the latest information technologies</li> </ul>	3.0	3.0	-	-
<b>3. Enhancing School Leadership for the Knowledge Age</b>				
<ul style="list-style-type: none"> <li>To enhance training on e-leadership and application of IT in education in continuing professional development courses for school heads</li> <li>To pilot dedicated IT leadership training for school principals to build knowledge, skills and understanding of key issues and impact of learning and teaching with IT</li> <li>HKEdCity to set up online communities as an e-platform to support principals’ IT training and sustain the momentum of such training</li> </ul>	3.0	3.0	2.0	2.0
<ul style="list-style-type: none"> <li>To strengthen the role of the regional “Centres of Excellence” network in supporting schools on IT in education</li> </ul>	0.5	0.5	0.5	0.5
<ul style="list-style-type: none"> <li>To disseminate assessment tools for wide adoption in schools for self-evaluation</li> </ul>	0.3	0.3	0.5	-

Implementation Measures	Original Estimate	Updated Estimate	Planned Measures	
	2004/05 school year (\$M)	2004/05 school year (\$M)	2005/06 school year (\$M)	2006/07 school year (\$M)
<b>4. Enriching Digital Resources for Learning</b>				
<ul style="list-style-type: none"> <li>To launch incentive schemes to encourage publishers/private sector to turn textbooks into e-learning materials, provide teachers with supplementary after-sale service in the use of such materials, and develop quality digital instructional content and software</li> </ul>	1.0	-	-	5.0
<ul style="list-style-type: none"> <li>HKEdCity to enhance production of digital resource materials, as well as licensing and adapting the contents of quality overseas e-learning material for local use</li> </ul>	3.5	3.5	1.5	3.5
<ul style="list-style-type: none"> <li>To continue the “electronic learning credits” scheme to encourage schools to acquire electronic and interactive learning materials as well as curriculum-specific computer peripherals to enhance the integration of IT in learning and teaching</li> </ul>	10.0	8.3	-	16.6
<b>5. Improving IT Infrastructure and Pioneering Pedagogy Using IT</b>				
<ul style="list-style-type: none"> <li>On a matching fund basis and subject to schools’ demonstrated needs, to improve the IT infrastructure of schools by – <ul style="list-style-type: none"> <li>➤ replacing or upgrading computer hardware;</li> <li>➤ installing additional LCD projectors and related systems; and</li> <li>➤ expanding the use of wireless technology</li> </ul> </li> </ul>	171.5*	134.3*	-	-
<ul style="list-style-type: none"> <li>To encourage innovation and trials of new technologies and equipment that may enhance learning and teaching</li> </ul>	2.0	1.0	2.0	2.0



Implementation Measures	Original Estimate	Updated Estimate	Planned Measures	
	2004/05 school year (\$M)	2004/05 school year (\$M)	2005/06 school year (\$M)	2006/07 school year (\$M)
<b>6. Providing Continuous Research and Development</b>				
<ul style="list-style-type: none"> <li>• To identify and develop exemplars for more effective sharing among teachers –               <ul style="list-style-type: none"> <li>➢ learning paradigms and pedagogies;</li> <li>➢ education resources;</li> <li>➢ school practices;</li> <li>➢ curriculum integration; and</li> <li>➢ systems and networks</li> </ul> </li> </ul>	1.0	0.2	3.0	3.0
<ul style="list-style-type: none"> <li>• To undertake studies on the effectiveness of the IT in education strategy –               <ul style="list-style-type: none"> <li>➢ a baseline monitoring and evaluation of the programme of IT in education implementation in schools; and</li> <li>➢ a research on the impact of IT on students' learning outcomes</li> </ul> </li> </ul>	-	-	1.3	1.3
<ul style="list-style-type: none"> <li>• To collaborate with local and overseas communities with a view to exploring the setting up of a Hong Kong-based research centre to pioneer leading edge IT applications, and to come up with creative means of applying IT in pedagogy, learning and teaching and other education purposes</li> </ul>	0.2	0.2	-	-
<b>7. Promoting Community-wide Support and Community Building</b>				
<ul style="list-style-type: none"> <li>• To put in place programmes for schools and Parent-Teacher Associations to help parents to ensure students understand the ethical, legal and health issues involved in using IT</li> </ul>	2.0	1.8	2.0	2.0
<ul style="list-style-type: none"> <li>• To pursue the collaborative schemes with the private sector and NGOs in support of IT in education –               <ul style="list-style-type: none"> <li>➢ a call centre service to answer queries and problems encountered by students and teachers;</li> </ul> </li> </ul>	1.0	0.8	3.0	2.0

Implementation Measures	Original Estimate	Updated Estimate	Planned Measures	
	2004/05 school year (\$M)	2004/05 school year (\$M)	2005/06 school year (\$M)	2006/07 school year (\$M)
<ul style="list-style-type: none"> <li>➤ an “Adopt a School” campaign to assist schools’ transformation into innovative learning institutions;</li> <li>➤ forums and events to foster IT culture in schools;</li> <li>➤ guidance on maintenance, administration and management of computer network; and</li> <li>➤ guidance to schools on IT security, skill sets required for IT technical staff and training roadmap for the development of technical personnel</li> </ul>				
<ul style="list-style-type: none"> <li>● To encourage “computer recycling” and donations to help needy students to bridge the digital divide</li> </ul>	0.2	-	25.8	23.5
<i>Subtotal for expenditure under Operating Account Subhead 700 Item 914 Implementation of information technology in education strategy</i>	40.2	33.2	52.6	71.7
<i>Subtotal for expenditure under Capital Account Subhead 603 Item 442 Replacement and upgrading of information technology facilities in public sector schools</i>	171.5	134.3		
<b>Grand Total</b>	<b>211.7</b>	<b>167.5#</b>	<b>52.6</b>	<b>71.7</b>

Note: All figure are rounded to the nearest \$0.1 million.

\* Except for the expenditure item marked in asterisk (\*) which is charged to Capital Account Subhead 603 Item 442 Replacement and upgrading of information technology facilities in public sector schools, all other expenditure items are charged to the Operating Account Subhead 700 Item 914 Implementation of information technology in education strategy.

# Some \$7 million more may be used to settle outstanding payments in the 2005-06 financial year. The lower than expected expenditure is mainly attributable to the reduced demand from schools for IT infrastructure replacement.

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## Computer Recycling Scheme

### Background

With the implementation of the IT in Education Strategy, the use of computers has become an integral part of learning and teaching in schools. At present, each primary school has an average of about 90 computers, and each secondary school about 250 computers to facilitate students' learning with IT. To enhance access to IT facilities, about 20 000 notebook computers are provided to secondary school students who do not have computers at home (the "Digital Bridge" project supported by the Quality Education Fund), and recurrent grants are provided to schools to facilitate them to extend the opening of their computer rooms beyond school hours for use by their students.

2. Hong Kong is enjoying a relatively high rate of penetration of computer and Internet at home. According to the Thematic Household Survey on Information Technology Usage and Penetration conducted by the Census and Statistics Department from June to August 2004, 94.2% of students aged ten and over who were studying in primary and secondary schools had computers at home. In other words, 5.8% of our student population aged 10 or above (about 36 270 students) do not have computers at home.

3. The Survey also examined the reasons for those students not having a computer at home –

No specific application	46.5%
Cost too high	29.1%
Did not know how to use computer	15.5%
Already had plan to purchase computer	12.6%
Had access to computers in other places	12.2%
Avoid children spending too much time on computer	7%
Lack of interest in using computer	2.6%
Others	3.6%

Note: Students could give more than one reason.

4. For the about 36 270 students who do not have a computer at home, if we take those giving the responses of (a) cost too high (29.1%); (b) had access to computers in other places (12.2%); and (c) did not know how to use computer (15.5%), as requiring help, the gross demand for computers at home to aid student learning would be around **20 000**.

## **Proposal**

5 In the light of the above, we plan to provide some **20 000 recycled computers** to needy students in the 2005/06 and 2006/07 school years. In these two school years, we are expecting public sector schools to displace a large number of old computers because of the funding made available to them by the Administration and the Quality Education Fund for replacement and upgrading of school IT infrastructure. On top of this, we will launch a public campaign to solicit contribution of unwanted computers from the private sector, public bodies and the community at large for recycling.

6. We plan to work with non-governmental organisations (NGOs) who are experienced in similar recycling endeavours. The NGOs will be responsible for refurbishing and upgrading the computers in both hardware and software. They will also see to the related logistics such as collection, storage, delivery and assisting schools in the allocation of the refurbished computers. Arrangement will be made to bundle Internet access service, technical support/maintenance services to the recipients until the end of the 2006/07 school year.

7. To cater for the needs of students, we will work towards providing flexibility to schools to decide on the best way to utilise the recycled computers. Schools may –

- (a) give away the computers to students in need;
- (b) loan the computers to students;
- (c) install the computers in school to improve access of computers by students; or
- (d) take a mix of the above approaches.

Schools which choose to install the computers in their premises will be required and facilitated to maximise the opening hours of these facilities especially during long school holidays.

8. We recognise the importance of support from parents for IT in education and to help make the best use of the computers to be given to their children. To this end, the NGOs involved in the scheme will provide basic IT skills training to parents of the recipients of the refurbished computers so that they will know the basics about how their children’s learning can be benefited from IT. Parents will also be helped to handle the ethical, legal and health issues related to the use of IT by their children. Such training will be conducted prior to the allocation of computers to the recipients to enhance family ownership and recognition of IT in education.

### **Financial Implications**

9. The total estimated expenditure for the proposal is \$49.3 million to be spent over two school years (or three financial years), broken down as follows –

	<b>Estimated Expenditure (\$M)</b>
(a) Refurbishment and upgrade cost	13.0
(b) Training for parents	5.0
(c) Technical support/maintenance services	10.0
(d) Software licence	1.0
(e) Internet access	14.0
(f) Administrative and publicity cost	1.7
(g) Contingency	4.6
<b>Total</b>	<b>49.3</b>

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