Extract from the minutes of meeting of the Panel on Education held on 19 April 2004

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IV. Way forward on Information Technology in education
[LC Paper No. CB(2)1979/03-04(01)]

5. At the invitation of the Chairman, Deputy Secretary for Education and Manpower (4) (DS(EM)4) briefed members on the main points of the Administration's paper on the subject.

Financial implications

6. Mr SIN Chung-kai asked the Administration to elaborate on the financial implications of implementing the strategic measures on the development and applications of information technology (IT) in school education proposed in the Administration's paper. He pointed out that as proposed in the 2004 Appropriation Bill, the Government had allocated a recurrent budget of about $280 million for the developments in the use of IT in education.

7. DS(EM)4 responded that the Government had allocated some $2,080 million for the implementation of the five-year strategy in the use of IT for learning in schools during the 1998-99 to 2002-03 school years. The allocation was mainly deployed on the provision of hardware equipment and development of education software to support learning and teaching in schools, and the training of teachers to become facilitators for student learning in classrooms. He explained that the non-recurrent budget for the use of IT in education in the next three years would depend on the outcome of the current consultation with the key stakeholders and the community as a whole. Based on the outcome of the consultation, the Education and Manpower Bureau (EMB) would proceed to bid the necessary funding support for implementing the strategic measures to achieve the finalized goals in the use of IT in education. He added that the Five-year Strategy had successfully built up a foundation for further development of IT in education and the non-recurrent expenditure for implementing the IT strategy in the next three years (the Next Strategy) would be lower than that of the previous five years.

8. Mr SIN Chung-kai expressed reservations about the Administration's estimate that the non-recurrent expenditure for IT in education in the next three years would be lower than that of the previous years. He pointed out that the IT trade was of the view that the average life span of computer hardware was around four years. He suggested that the Administration should set aside sufficient non-recurrent provisions for upgrading or replacing obsolete IT

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equipment to support the increasing learning and teaching needs in schools in order to promote the long-term competitiveness of Hong Kong in the international arena.

9. DS(EM)4 responded that the Administration acknowledged the importance of making use of the up-to-date IT equipment and systems in school education. According to a recent survey, around 30% of the computers in schools had been installed for around five years. The Administration would monitor the situation and arrange replacement of the outdated computers in implementing the Next Strategy.

The position of Hong Kong in the use of IT in education

10. Mr SIN Chung-kai referred to a white paper entitled "2003 e-learning readiness rankings" published by the Economic Intelligence Unit in cooperation with the International Business Machines. He pointed out that in terms of the application of e-learning in education, Hong Kong ranked at 19 while South Korea, Singapore and Taiwan ranked at 5, 6 and 16 respectively. He asked the Administration about the current and future positions of Hong Kong in comparison with its neighbouring jurisdictions on the use of IT in school education after implementation of the next Strategy.

[*Post-meeting note* : The paper entitled "2003 e-learning readiness rankings" was subsequently sent to members vide LC Paper No.CB(2)2154/03-04 on 26 April 2004.]

11. DS(EM)4 responded that Hong Kong compared favourably with its neighbouring countries in the Asian region. He pointed out that the implementation of the Five-year Strategy had laid the necessary infrastructure, provided teachers with basic training on the use of IT, and collected a rich repository of digital education resources. There was now a computer for every 4.4 and 11 students in secondary and primary schools respectively. In contrast, South Korea provided one computer for every 10, seven and five students in primary, junior and senior secondary schools respectively. At present, all schools in Hong Kong had broadband connection to the Internet, all teachers had completed IT training at the basic level. In particular, the Hong Kong Education City (HKEdCity) was launched in August 2000 to serve and promote quality education and IT for lifelong and life-wide learning. HkEd City was corporatized in 2002 and would aim at providing an e-learning and e-business platform for teachers, parents and students.

12. DS(EM)4 further said that the Administration had commissioned the University of Hong Kong to conduct an interim review on the effectiveness of the Five-year Strategy in 2001, the results of which had confirmed the effectiveness of hardware provisions to schools, the need for improvements in teachers enablement and in particular, the integration of IT in learning and

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teaching. The Administration had also commissioned the Hong Kong Polytechnic University (PolyU) to review the overall progress of the Five-year Strategy. The review would examine the readiness of schools, teachers and students to use IT for enhancing the effectiveness of learning and teaching. The review would be substantially completed by mid-2004 and provide pointers to fine-tune the strategy and the implementation plan for IT education in the next three years.

13. DS(EM)4 added that an IT committee under the United Nations Educational, Scientific and Cultural Organization had recently conducted an analysis on the use of IT in education for a total of 17 Asian countries. The analysis had found that the developed countries such as South Korea, Australia and Singapore in general had a high student-to-computer ratio and made use of advanced IT facilities and intranets in school education. Most importantly, IT was an indispensable element in the development and delivery of the school curriculum, and e-learning was gradually being adopted in learning and teaching. On the basis of these parameters, the development of IT in education in Hong Kong in the past few years did not compare unfavourably with that in the countries mentioned.

14. Mr SIN Chung-kai asked whether the Next Strategy would set out the benchmarks for assessing the IT developments in education in the next three years. He considered that the Administration should set out the standards to be achieved and compare the developments of Hong Kong with similar developments in other jurisdictions in the use of IT in education on an on-going basis.

15. DS(EM)4 responded that the report of the PolyU on the overall progress of the Five-year Strategy would provide the baseline for planning the future developments of IT in education.

16. Principal Assistant Secretary for Education and Manpower (Quality Education) (PAS(QE)) supplemented that unlike its popularity in countries with a large territory, e-learning in Hong Kong mainly played a supplementary role to mainstream classroom education in schools under the Five-year Strategy. Nevertheless, EMB recognised the wide applications and importance of e-learning in the promotion of lifelong and life-wide learning, and would aim at promoting e-learning as a means to break through the physical barrier of classroom learning under the Next Strategy. She added that as an initial stage of development in the use of IT in education, the Five-year Strategy had focused more on the establishment of a basic infrastructure than on the development of e-learning for school education.

17. Ms Emily LAU said that she shared the views and concerns of Mr SIN Chung-kai on the development and use of IT in school education. She expressed disappointment that while the Administration had claimed a pioneering role in

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the use of IT in the delivery of public services, it had lagged behind the neighbouring countries in the use of IT in education and in particular, in the application of e-learning for teaching and learning. She asked how Hong Kong compared with the advanced countries in terms of the number of computers at the household level. Ms LAU also requested the Administration to provide relevant figures which would indicate the current situation of Hong Kong in the use of IT in education in comparison with other countries.

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18. DS(EM)4 responded that although Hong Kong started a bit slower in the application of e-learning, it compared favourably with other countries in terms of the average number of computers in school, the training of teachers in the use of IT, and the provision of digital education resources to schools. According to the household survey conducted by the Census and Statistics Department in the second quarter of 2003, 91.3% of household units with a child aged at 10 or above had a personal computer at home. This was a marked improvement compared with the situation a few years ago. He added that under the Five-year Strategy, a number of measures had been implemented to enhance students' access to IT facilities, including the provision of an incentive grant to over 1 000 public sector schools to extend the opening hours of computer rooms for use by students after school. PAS(QE) supplemented that according to an independent study conducted by the University of Hong Kong on the use of IT in education in different jurisdictions, some six to eight cases in Hong Kong were graded as outstanding achievements in an international context.

Support for use of IT in school education

19. Mr CHEUNG Man-kwong considered that the community would not accept Hong Kong's continued ranking at the bottom among the "four dragons" in the use of IT in education. He expressed concern that the policy decision to discontinue the provision of IT Co-ordinators in schools would jeopardize further developments in the use of IT in education. He pointed out that although teachers were trained on the use of IT in teaching, they would not be able to keep pace with the on-going developments of IT and serve the role of IT Co-ordinators to identify the latest and appropriate IT developments for applications in school education. Mr CHEUNG questioned how the Administration could achieve the goals in its paper without the provision of IT Co-ordinators in schools and suggested that the Administration should withhold the implementation of the policy until the result of the overall review of the Five-year Strategy was known.

20. DS(EM)4 responded that the provision of IT Co-ordinators was aimed at assisting schools in the use of IT in education under the Five-year Strategy. He pointed out that all teachers had now completed basic IT training and many of them had achieved the intermediate and upper intermediate level in the use of IT in education. To provide schools with flexibility in the use of IT grants, the Administration was considering merging the various IT grants now being

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disbursed to schools to enable schools to employ IT Co-ordinators if they considered it necessary.

21. Mr CHEUNG Man-kwong pointed out that teachers were trained to use IT in enhancing the effectiveness of teaching and learning, but were not professionally trained to handle procurement, management and maintenance of computers and networks, and use of IT across the curriculum. He strongly suggested that the Administration should continue the provision of IT Co-ordinators to enhance the use of IT in education to improve the ranking of Hong Kong in comparison with its competitors in the years to come. Ms Emily LAU said that she shared the views and concerns of Mr CHEUNG.

The Next Strategy and implementation measures

22. Mr LEUNG Yiu-chung agreed that the Five-year Strategy had improved the use of IT in enhancing the effectiveness of teaching and learning in school education, such as the publication of the "Basic Education Curriculum Guide – Building on Strengths" by the Curriculum Development Council (CDC) in 2002 which provided, among others, guidance to schools on fostering an appropriate environment for interactive learning with IT, and making appropriate use of IT in teaching various subjects. He asked how EMB would reinforce curriculum and resources support for schools, and enforce the implementation measures as proposed in paragraph 15 of the Administration's paper and monitor the on-going developments in the use of IT in schools.

23. DS(EM)4 responded that EMB would monitor the progress of IT development in schools by way of school visits and surveys. Based on the findings of the overall progress made under the Five-year Strategy, EMB would concentrate on the leadership capacities of principals and teachers in the development of holistic and strategic school plans for making effective use of IT in teaching, the ability of students to use IT in learning, and the better integration of IT into the curriculum and the learning and teaching processes. He highlighted that the competence of principals and teachers in the application of IT was most crucial in enhancing further engagement of IT in teaching and the development of a broad framework of "information literacy" in school education.

24. PAS(QE) supplemented that the development of a framework of "information literacy" was crucial for facilitating better integration of IT into the curriculum as well as the learning and teaching processes. She pointed out that CDC had published the "Information Technology Learning Targets" in 2000 to pave the way for the integration of IT into the curriculum, and the "Learning to learn – the way forward in curriculum development" in 2001 to reinforce the role of IT as a tool to support the education reform measures. She added that effectiveness in the application of IT to enhance students' learning was more significant than the relative position of Hong Kong in the use of IT in the

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international ranking.

25. PAS(QE) highlighted that the goals to be achieved through the Next Strategy would, apart from enhancing the leadership capacity of principals, aim at strengthening teachers' capability to use IT for curriculum and pedagogical innovations and students' abilities to use IT in lifelong learning and creative problem solving in the information age. Specifically, a broad framework of "information literacy" for students would be developed to provide teachers and students with a clearer picture on the learning targets of using IT in education. She stressed that such development did not mean the addition of a new subject in the school curriculum or a set of benchmarks for assessment purposes. To facilitate implementation, EMB would provide schools with a set of tools that would incorporate useful references for teachers to follow. In addition, principals would be required to submit their plans for the implementation of the proposed measures to promote the use of IT in their schools. EMB would provide professional advice and support to schools and principals by way of the existing quality assurance mechanism.

26. Mr LEUNG Yiu-chung asked how EMB would monitor the use of IT by teachers in teaching and the practices of IT by students in learning. He suggested that EMB should introduce appropriate measures to ensure the provision of sufficient opportunities for students to learn the necessary skills, knowledge and the correct attitudes in the use of IT in learning. He also asked how EMB would monitor the progress of Direct Subsidy Scheme (DSS) schools in the use of IT in teaching and learning.

27. PAS(QE) responded that appropriate guidelines and sufficient practices on the use of IT were essential for enhancing effective integration of IT into the curriculum and the teaching and learning processes. She agreed that the Administration should review the school curriculum with a view to reinforcing the practical aspects of using IT in students' learning activities. She added that the Administration would review the 25% standard for the use of IT in school education under the Five-year Strategy and provide more flexibility for principals and teachers to design their programmes of applications of IT in teaching and learning activities under the Next Strategy. DS(EM)4 added that EMB would monitor the progress of DSS schools in the use of IT in teaching and learning in accordance with the terms and conditions of the service agreement between the Government and the schools.

28. Dr David CHU said that he shared the concern of Mr CHEUNG Man-kwong and LEUNG Yiu-chung on the use of IT in school education. He pointed out that e-learning was widely adopted in education in the United States of America where submission and correction of assignments, as well as communication between students and teachers outside the classrooms, were all made through electronic means. He considered that school education in Hong Kong should make use of e-learning and go beyond the limits of classrooms.

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29. PAS(QE) responded that the Five-year Strategy had successfully provided the necessary infrastructure for IT in education to take off. The Next Strategy would include the promotion of e-learning to break through the physical barriers of classroom learning at set times. She assured members that it would not be long before students could submit their assignments and receive their teachers' comments through electronic means.

30. In concluding the discussion, the Chairman invited members to consider the proposals in the consultation document and make suggestions, if any, to EMB before the deadline of 15 May 2004.

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