

# **立法會**

## ***Legislative Council***

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### **Panel on Education**

**Meeting on 9 November 2015**

### **Background brief on issues related to the Fourth Strategy on Information Technology in Education**

#### **Purpose**

This paper provides background information and summarizes the major views and concerns expressed by Members on issues related to the Fourth Strategy on Information Technology in Education ("ITE4").

#### **Background**

##### Past IT in Education Strategies

2. In 1998, the Administration issued the First IT in Education Strategy ("ITE1") document entitled "Information Technology for Learning in a New Era: Five-Year Strategy 1998/99 to 2002/03". The ITE1 focused on equipping schools with necessary IT facilities, connecting them to the Internet and the provision of digital resources for learning and teaching.
3. In July 2004, the Administration published the Second IT in Education Strategy ("ITE2") document entitled "Empowering Learning and Teaching with Information Technology" with the objectives to enhance students' IT literacy, build up teachers' capacity, nurture e-leadership among school leaders, engage the community in creating an environment conducive to the use of IT in education and narrow the digital divide. The five-year ITE2 was launched in the 2004-2005 school year.
4. The Third IT in Education Strategy ("ITE3") was set out in the document "Right Technology at the Right Time for the Right Task" issued in December 2008. The ITE3 aimed to assist schools in drawing up and implementing school-based IT in education development plans; and integrating IT into learning and teaching activities so as to improve students' learning effectiveness

and empower teachers and students to use the right technology at the right time for the right task in the learning and teaching process.

5. According to the Education Bureau ("EDB"), the three IT in Education Strategies have laid a solid foundation in areas such as the provision of basic IT infrastructure, learning resources, enhancement of teachers' professional capacity and student learning. In addition, a series of major ITE-related initiatives have been launched, including the provision of a recurrent Composite Information Technology Grant, the Pilot Scheme on e-Learning in Schools, and the E-Textbook Market Development Scheme ("EMADS").

#### ITE4

6. On 7 May 2014, EDB launched a public consultation on ITE4 and issued a document entitled "Realising IT Potential, Unleashing Learning Power, a Holistic Approach". According to the consultation document, the goal of ITE4 was to unleash the learning power of students to learn to learn and to excel through realizing the potential of IT in enhancing interactive learning and teaching experiences. Initiatives under ITE4 covered various areas, including upgrading of WiFi infrastructure in all public sector schools, enhancing the supply of quality e-learning resources, curriculum renewal and transformation of pedagogical practices, etc. A holistic approach was adopted and ITE4 covered the following five key actions<sup>1</sup> –

Action 1	Enhancing schools' IT infrastructure and re-engineering the operation mode
Action 2	Enhancing the quality of e-learning resources
Action 3	Renewing curriculum, transforming pedagogical and assessment practices
Action 4	Building professional leadership, capacity and communities of practice
Action 5	Involving parents, stakeholders and the community

7. To implement ITE4, the Administration had earmarked a total provision of \$105 million in the Estimates of Expenditure 2015-2016 to cover the following –

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<sup>1</sup> According to the information provided by EDB in May 2015, the Administration had finalized the measures under ITE4 in accordance with the consultation outcome and added a sixth action of conducting on-going research and evaluation studies for coherent and sustainable development of IT in education.

- (a) as an extension to the Support Scheme for e-Learning in Schools ("the Support Scheme")<sup>2</sup>, a one-off grant totaling \$90 million to enable 900 public sector schools to acquire mobile computing devices;
- (b) following the launch of EMADS in the 2014-2015 school year, to provide the Hong Kong Education City Limited ("HKECL")<sup>3</sup> with a one-off funding of \$10 million to enrich e-learning resources; and
- (c) a non-recurrent funding of \$5 million to implement measures to reach out to parents and to provide schools with the necessary support including technical advisory services and/or centralized procurement procedures.

The estimated expenditure for ITE4-related initiatives in the 2015-2016 financial year amounts to \$51 million<sup>4</sup>.

## **Major views and concerns**

8. After commencement of the Fifth Legislative Council, the Panel on Education ("the Panel") had discussed the use of IT in education at various meetings. At the meeting held on 9 June 2014, the Panel was briefed on major proposals under ITE4. Members also sought information on ITE4 in the examination of the Estimates of Expenditure 2015-2016.

### Upgrading the IT facilities of schools

9. At the meeting held on 9 December 2013, the Panel passed a motion moved by Hon Charles MOK and another moved by Dr Hon Elizabeth QUAT. The wordings of the two motions are in **Appendix I**. One of the requests stated in the motions was to provide schools with free WiFi access to the Internet. At the Panel meeting held on 9 June 2014, members welcomed the provision of \$90 million to enable 900 public sector schools to acquire mobile computing devices (i.e. paragraph 7(a) above). However, they were concerned about the timetable for setting up WiFi infrastructure for these schools. As confirmed by EDB in

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<sup>2</sup> On 10 January 2014, the Finance Committee approved a non-recurrent commitment of \$50 million to launch the Support Scheme which offered one-off funding for 100 public sector schools to acquire mobile computing devices and subscribe for WiFi services on a pilot basis for three years.

<sup>3</sup> The HKECL is a wholly owned company of the Government for serving the education sector with, among others, an information portal and a resource depository as a one-stop shop for learning and teaching materials.

<sup>4</sup> See the Controlling Officer's Reply (Serial No. EDB472) to Initial Written Question in the examination of Estimates of Expenditure 2015-16.

response to members' concerns, it was the plan under ITE4 to provide funding to these schools for enhancing their WiFi infrastructure by phases starting from the 2015-2016 school year.

10. Noting that the Administration would encourage schools to adopt an outsourcing model in their acquisition of WiFi infrastructure and support services, there was a view that there should be multiple service providers to ensure fair market competition and provide schools with choices. According to EDB, the experience of the 100 participating schools under the Support Scheme in acquiring WiFi services could be shared among other schools for reference.

#### Curriculum and pedagogical practice

11. When the Panel was consulted on ITE4 at the meeting on 9 June 2014, some members considered that in addition to the provision of IT infrastructure in schools, it was also important to enable a paradigm shift from a teacher-centred mode of teaching to a student-centred mode of learning, such as adopting the Flipped Classroom approach. In this regard, the Administration confirmed that one of the actions under ITE4 to renew curriculum, transform pedagogical and assessment practices would address concerns about reforming the conventional teaching and learning mode to one that was more interactive, self-directed and beyond the confines of time and space.

12. According to some members, some secondary schools did not offer the Information and Communication Technology ("ICT") subject. Question was raised as to whether the Administration would enhance the curriculum of the ICT subject at secondary levels so as to encourage more students to take the subject. According to the Administration, a review of the ICT components of the enriched Technical Education Key Learning Area ("KLA") curriculum had been conducted. It was expected that starting from the 2016-2017 school year, all secondary schools will adopt a revised curriculum at junior secondary levels.

#### Support for schools and teachers

13. Given the importance of implementing various ITE-related initiatives to deliver more effective teaching and learning outcomes, some members stressed the need to create a dedicated post of IT Coordinator ("ITC") and "Technical Support Services Officer" in each school to provide professional support to teachers and schools in developing the necessary school-based IT strategies and action plans. As IT personnel were highly sought after by all industries, a permanent ITC post should be established in each school, or sufficient financial resources should be provided for each school to recruit and retain an ITC.

14. According to EDB, it would be more appropriate for individual schools to make use of the funding under the Operating Expenses Block Grant and the

Composite Information Technology Grant<sup>5</sup> to procure the necessary technical support and services according to their specific needs. For instance, schools might consider adopting a subscription model for acquiring WiFi network service so that the maintenance service could be outsourced to professional personnel. The EDB considered that this approach could accord greater flexibility to schools in deploying resources and determining the model that could best meet their requirements.

15. Some members made the observation that the ICT subject was mostly taught in schools by teachers of other subjects. Question was raised as to whether consideration would be given to specifying the professional qualifications or training required of teachers of information and communication technology courses. Concern was also raised about the readiness of teachers in taking forward the various initiatives under ITE4 and the pressure faced by them as a result of increased workload and pedagogical changes. As explained by the Administration, one of the actions under ITE4 was to enhance professional leadership and the capacity of school leaders and teachers through the provision of professional development programmes, at both the generic and KLA-specific levels. Meanwhile, a web-based Resource Pack would also be developed to support schools to tailor-make their own e-learning development plans.

### **Latest position**

16. The Administration will brief the Panel on the progress on implementing ITE4 at the meeting to be held on 9 November 2015.

### **Relevant papers**

17. A list of relevant papers on the website of the Legislative Council is in **Appendix II**.

Council Business Division 4  
Legislative Council Secretariat  
3 November 2015

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<sup>5</sup> With effect from the 2004-2005 school year, a number of recurrent grants for various IT in education purposes had been merged to form an annual recurrent Composite Information Technology Grant. After a review on the ambit and provision of the grant, the Education Bureau decided to relax the usage of the grant and increase its provision with effect from the 2008-2009 school year. Currently, all public sector schools can flexibly deploy this grant as appropriate to meet their operational needs for IT in education, including the purchase of e-Learning resources, the engagement of technical support personnel, upgrading and replacement of IT facilities.

**教育事務委員會在 2013 年 12 月 9 日舉行的會議上  
就議程項目"支援學校採用電子教科書以利便教與學  
及提升網上學校行政及管理系統"通過的議案**

**Motion passed under the agenda item "Supporting schools to adopt e-textbook  
to facilitate learning and teaching and upgrading of the Web-based School  
Administration and Management System"  
at the meeting of the Panel on Education held on 9 December 2013**

**議案措辭**

教育局於 1998 年推出第一個資訊科技教育策略，至今已整整 15 年，可是仍然未能向全港所有學校提供資訊科技基礎建設，一直缺乏電子學習的「全面計劃」。就此，本會促請政府：

- (一) 於緊接的 3 年內在全港所有學校落實資助，改善每所學校資訊科技基礎設施和教師能力；
- (二) 當局必須於是次計劃，公開甄選準則，及先給予弱勢或「資源嚴重不足」的學校發放津貼；及
- (三) 當局應在津貼推行全校 wifi 無線上網服務費用、網絡硬件或流動電腦裝置外，增加編制「資訊科技統籌員」及「技術支援服務人員」。

(莫乃光議員動議)

## **Wording of the Motion**

(Translation)

That it has been 15 years since the Education Bureau (“EDB”) launched the first Information Technology (“IT”) in Education Strategy in 1998; however, EDB is still unable to provide IT infrastructure to all schools over the territory, and a "comprehensive plan" on electronic learning has always been lacking; in this connection, this Panel urges the Government to:

- (1) effect the provision of subsidies to all schools over the territory in the next three years to improve the IT infrastructure of every school and enhance teachers' capability;
- (2) make public the selection criteria under this scheme and accord priority to schools which are disadvantaged or "seriously lacking in resources" in the disbursement of subsidies; and
- (3) increase the staff establishment by creating the posts of "IT Coordinator" and "Technical Support Services Officer" in addition to providing subsidies to schools for the provision of Wi-Fi access to the Internet within their entire campuses and for the procurement of network hardware or mobile computer devices.

(Moved by Hon Charles MOK)

**教育事務委員會在 2013 年 12 月 9 日舉行的會議上  
就議程項目"支援學校採用電子教科書以便利教與學  
及提升網上學校行政及管理系統"通過的議案**

**Motion passed under the agenda item "Supporting schools to adopt e-textbook  
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**議案措辭**

鑒於利用電子教科書對於落實推行電子教學尤為重要，南韓政府更計劃於 2015 年全面以電子教科書取代傳統課本及實行「一人一電腦」。就此，本會促請政府：

1. 落實在未來 3 年內分階段於全港落實全面 Wi-Fi 校園；
2. 為老師舉辦電子教學工作坊，以提升電子教學成效；及
3. 訂定政策目標及時間表，積極在未來幾年內全面推行電子教科書教學，實現學生「自攜裝置」(BYOD)/ 攜帶電子書包上課。

(葛珮帆議員動議)



## **Wording of the Motion**

(Translation)

That, given that the use of e-textbooks is of particular importance to the implementation of e-teaching, and the South Korean government even plans to replace traditional textbooks with e-textbooks across the board and adopt the "one student one computer" practice in 2015, this Panel urges the Government to:

- (1) fully implement Wi-Fi campus by phases all over the territory in the coming three years;
- (2) organize e-teaching workshops for teachers to enhance the effectiveness of e-teaching; and
- (3) formulate policy objectives and a timetable for the active and full implementation of teaching with e-textbooks in the coming few years to enable students to "bring your own device" (BYOD)/bring their e-schoolbags to school.

(Moved by Dr Hon Elizabeth QUAT)

## List of relevant papers

Meeting	Date of meeting	Paper
Panel on Education	7.2.2013 (Item IV)	<u>Agenda</u> <u>Minutes</u>
Legislative Council	30.10.2013	<u>Official Record of Proceedings</u> <u>Pages 141 – 144 (Question 20)</u>
Legislative Council	13.11.2013	<u>Official Record of Proceedings</u> <u>Pages 96 – 101 (Question 12)</u>
Panel on Education	9.12.2013 (Item VI)	<u>Agenda</u> <u>Minutes</u> <u>CB(4)301/13-14(01)</u> <u>CB(4)520/13-14(01)</u>
Finance Committee	10.1.2014 (Item No.5)	<u>FCR(2013-14)50</u> <u>Minutes</u>
Panel on Education	9.6.2014	<u>Agenda</u> <u>Minutes</u>
Finance Committee	1.4.2015	<u>Administration's replies to</u> <u>members' initial written questions</u> <u>in examining the Estimates of</u> <u>Expenditure 2015-2016 (Reply</u> <u>serial numbers: EDB158, EDB175,</u> <u>EDB331, EDB332, EDB472 and</u> <u>EDB495)</u>
Panel on Education	11.5.2015 (Item IV)	<u>Agenda</u> <u>Minutes</u> <u>CB(4)925/14-15(02)</u> <u>CB(4)1157/14-15(01)</u>