

# 立法會

## *Legislative Council*

LC Paper No. CB(4)765/13-14(02)

Ref : CB4/PL/ED

### **Panel on Education**

**Meeting on 9 June 2014**

### **Background brief on issues related to information technology in education**

#### **Purpose**

This paper summarizes the major concerns expressed by members of the Panel on Education ("the Panel") on issues related to harnessing information technology ("IT") in education.

#### **Strategies on Information Technology in Education**

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 of "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 Administration, the three ITE Strategies implemented since the 1998-1999 school year laid a solid foundation in areas such as the provision of basic IT infrastructure, learning resources, enhancement of teachers' professional capacity and students' learning. A series of ITE-related initiatives such as the E-textbook Market Development Scheme ("EMADS") have also been launched in recent years.

6. The Administration launched a consultation on the Fourth Strategy on Information Technology in Education ("ITE4") and issued a document entitled "Realising IT Potential, Unleashing Learning Power, a Holistic Approach" on 7 May 2014. According to the consultation document, student learning is central to ITE4. The goal of ITE4 is 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.

### **Deliberations of members of the Panel**

7. The Panel discussed the use of IT in education at various meetings. Members' views and concerns on a number of salient issues are summarized in the ensuing paragraphs.

#### Professional IT support for schools

8. 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 in order 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.

9. Some members made the observation that the subject of information and communication technology 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.

10. According to the Education Bureau ("EDB"), it would be more appropriate for individual schools to make use of the provisions under the Operating Expenses Block Grant and the Composite Information Technology Grant<sup>1</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. In connection with the consultation on ITE4, the Administration indicated that it would continue to explore how recurrent resources could be deployed to achieve optimal outcomes.

### Adoption of e-textbooks and e-learning

#### *E-textbooks*

11. To encourage potential and aspiring e-textbook developers to develop e-textbooks in line with the local curricula and to try out a quality vetting and assurance mechanism for e-textbooks with a view to drawing up a Recommended Textbook List for e-textbooks, the Administration launched EMADS with a non-recurrent commitment of \$50 million for providing seeding grants on a matching grant basis to successful non-profit-making e-textbook developers. The EMADS was launched in two phases in 2012 and 2013 respectively. EDB reported to the Panel in December 2013 that the first batch of e-textbooks developed under Phase I of EMADS would be available for use in schools in the 2014-2015 school year.

12. Some members expressed concern about the price of e-textbooks and asked whether EDB would consider providing e-textbooks to all students free of charge. The Administration advised that it would need

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<sup>1</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.

to explore with stakeholders the feasibility of providing free e-textbooks. Meanwhile, EDB had already set up a One-stop Portal for Learning and Teaching Resources where schools could have free access to learning and teaching materials.

### *Support Scheme on e-Learning in Schools*

13. At its meeting on 9 December 2013, the Panel had considered EDB's proposal to launch a three-year trial scheme under which a one-off grant would be provided to about 100 public sector schools and local schools under the Direct Subsidy Scheme to enhance or top up their IT infrastructure to cater for the need of using e-textbooks and other e-learning resources<sup>2</sup>. It was proposed that each participating school would receive a one-off grant in the range of \$242,500 to \$606,400 for use until the end of the 2016-2017 school year. Unused grant would be clawed back to the Government.

14. In response to members' enquiry about how the participating schools would be selected, EDB explained that the Steering Committee on Strategic Development of Information Technology in Education would formulate the selection criteria. The number of selected schools (i.e. 100) had been estimated on the basis that about 80 Partner Schools which had joined the try-out under EMADS were interested in adopting e-textbooks.

15. Some members were gravely concerned that under the trial scheme, those schools with relatively high IT-readiness would be provided with further funding while schools lagging behind in their IT capacity would not receive additional support. This would widen the digital divide among schools in their implementation of e-learning. Concern was also raised that out of some 1 000 public sector schools, only a very small proportion had been sufficiently equipped with WiFi connectivity to effectively use e-textbooks.

16. At the Panel's request, the Administration subsequently provided a list of the 100 schools (53 primary schools, 42 secondary schools and five special schools) selected to participate in the trial scheme. It also advised that applications had been selected based on their three-year e-learning development plan submitted, as well as their track record on IT in education and existing IT infrastructure<sup>3</sup>.

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<sup>2</sup> The trial scheme was subsequently referred to as the "Support Scheme on e-Learning in Schools". See LC Paper No. CB(4)520/13-14(01) issued on 28 March 2014. The relevant funding proposal FCR(2013-14)50 was approved by the Finance Committee on 10 January 2014.

<sup>3</sup> See LC Paper No. CB(4)520/13-14(01).

17. To help teachers establish pedagogically sound use of e-textbooks, the Administration would provide intensive and tailor-made professional development programmes for teachers of the schools participating in the trial scheme to beef up their knowledge and skills on e-learning. It was envisaged that over time, a critical mass of teachers with higher IT-readiness would be available to facilitate the territory-wide adoption of e-textbooks and e-learning. To facilitate the effective implementation of e-learning, some members stressed the need for additional teaching manpower as one teacher could hardly assist different groups or individual students at the same time.

18. The Panel noted that funding support would be provided for schools to acquire mobile learning devices because the "bring-your-own-device" approach was not yet common in the local school sector. Some members saw merits in providing a device to each student instead of two to three students having to share one device as envisaged by the Administration under the trial scheme.

*Relevant motions passed by the Panel*

19. At the recent meeting of the Panel 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**.

20. Regarding one of the requests stated in the motions to provide schools with free WiFi access to the Internet, the Administration had informed the Panel that it would consult stakeholders on the timetable of building up the WiFi infrastructure in the campus of all government-funded schools under the consultation for ITE4. The relevant policy would be devised according to views gathered during the consultation<sup>4</sup>.

**Latest position**

21. The Administration will brief the Panel on the consultation on ITE at the meeting to be held on 9 June 2014. According to the Administration, it plans to submit the relevant funding proposal to the Finance Committee in July 2014.

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<sup>4</sup> See LC Paper No. CB(4)301/13-14(01) for EDB's response to the two motions passed by the Panel.

**Relevant papers**

22. A list of relevant papers is in **Appendix II**.

Council Business Division 4  
Legislative Council Secretariat  
3 June 2014

**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 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  
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**

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)

## Appendix II

### List of relevant papers

Meeting	Date of meeting	Paper
Panel on Education	12.11.2007 (Item V)	<a href="#">Agenda</a> <a href="#">Minutes</a>
Panel on Education	14.1.2008 (Item VII)	<a href="#">Agenda</a> <a href="#">Minutes</a>
Panel on Education	31.1.2008	<a href="#">Agenda</a> <a href="#">Minutes</a>
Finance Committee	22.2.2008 (Item No.2)	<a href="#">FCR(2007-08)58</a> <a href="#">Minutes</a>
Panel on Education	8.2.2010 (Item V)	<a href="#">Agenda</a> <a href="#">Minutes</a> <a href="#">CB(2)2078/09-10(01)</a>
Panel on Education	14.5.2012 (Item IV)	<a href="#">Agenda</a> <a href="#">Minutes</a>
Finance Committee	1.6.2012 (Item No.4)	<a href="#">FCR(2012-13)35</a> <a href="#">Minutes</a>
Panel on Education	7.2.2013 (Item IV)	<a href="#">Agenda</a> <a href="#">Minutes</a>
Panel on Education	9.12.2013 (Item VI)	<a href="#">Agenda</a> <a href="#">Minutes</a> <a href="#">CB(4)301/13-14(01)</a> <a href="#">CB(4)520/13-14(01)</a>
Finance Committee	10.1.2014 (Item No.5)	<a href="#">FCR(2013-14)50</a> <a href="#">Minutes</a>