Working Group on
Textbooks and e-Learning Resources Development

Main Report

Education Bureau

October 2009

Contents

Chapter 1

Preface

Background

1.1   Information and communication technology has developed rapidly over the past twenty years. Its wide application makes a huge impact on the society and our daily life. In particular, information technology (IT) breaks the traditional boundaries of learning and teaching, and brings enormous changes to the education sector. The Government has been promoting the use of IT in education vigorously in the past decade. One of its goals is to turn e-Learning into an effective learning mode. Through the extensive use of e-Learning resources, it aims to enhance students' learning effectiveness, develop their higher-order thinking and information management abilities (which include proficiency in searching, organising, evaluating and presenting information), as well as nurturing their capabilities for life-long learning, which would give them a competitive edge in our rapidly changing world. It has become a global trend to use e-Learning resources as a medium for learning and teaching both inside and outside the classroom. Although e-Learning resources will not completely replace printed textbooks, their use is bound to increase in the foreseeable future.

1.2   Nonetheless, in spite of the increasing popularity of e-Learning, textbooks will remain an important medium for student learning and classroom teaching. A research study (titled "A Comprehensive Strategy for Textbooks and Learning Materials"[1]) conducted by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 2005 confirms that textbooks and learning materials play a key role in the learning process. Although they may vary in design, content and application, their capability of providing students with useful reference materials and of functioning as an essential tool for interactive and effective learning is universally recognised. Quality textbooks and learning materials are indispensable to quality education.

---

[1] Website: http://unesdoc.unesco.org/images/0014/001437/143736eb.pdf

1.3   The Government has never taken up the role of publishing textbooks. Students' textbooks are freely published by publishers and are priced with reference to market factors and development costs. The role of the Education Bureau (EDB) in textbook supply is mainly to monitor the quality of textbook content. In line with the principle of school-based management, teachers are entrusted with the task of exercising their professional judgement to select the textbooks and learning materials they deem most suitable for their students.

1.4   Students are required to buy textbooks set down in the school textbook list every year. They impose a great financial burden on parents, and their prices have become a public concern. Price surveys have been conducted annually by many organisations for monitoring purposes.

1.5   Since its establishment in 1974, the Consumer Council has been conducting yearly surveys on the changes in textbook prices, the financial burden which textbooks have placed on parents, as well as other issues such as textbook revision. The findings are published in its monthly magazine, *Choice*. The Consumer Council has found that the prices of most primary and secondary textbooks are on the rise every year.

1.6   Although textbook production is a commercial activity in Hong Kong, the EDB has always been concerned about textbook prices and has actively communicated with the Consumer Council, textbook publisher associations, school councils and the Independent Commission Against Corruption to find feasible ways to regulate textbook prices. The EDB has adopted a series of measures to lower the costs in order to ease the financial burden of parents without interfering with the market. However, despite the reduction in production costs as a result of the economic downturn in recent years, textbook prices have continued to rise, which in turn adds to parents' financial burden. This has led to much public debate and many believe that the Government should introduce more vigorous measures to resolve the problem.

1.7   In response to public opinions on textbook prices and e-Learning, the Chief Executive announced in the 2008-09 *Policy Address*, "To enhance students' ability for self-learning and

interactive learning, and to promote the use of e-books rather than printed copies, we will look into the development of electronic learning resources. The use and prices of school textbooks have become a public concern. Some people have pointed out that the frequently-revised textbooks have imposed a financial burden on parents in recent years. We will invite information technology experts, parents, school principals, teachers, publishers and others to form a task force to study these issues in detail. We will draw on international experience in formulating long-term measures to alleviate the financial burden on parents and to facilitate learning." For this reason, the Government set up the Working Group on Textbooks and e-Learning Resources Development (WG) in October 2008 to examine the development of textbooks and e-Learning resources, as well as to make recommendations to the Secretary for Education (SED) to facilitate the formulation of relevant strategies, measures and implementation plans. Please see *Appendix 1* for the WG membership list.

1.8   Throughout the investigation and discussion on the development of textbooks and e-Learning resources, the WG has strived to uphold the principle of enhancing the quality of learning and teaching. On this basis, it has considered feasible ways to lower textbook prices, improve the existing school textbook system, and provide suitable e-Learning resources for schools to enhance students' learning effectiveness.

Terms of Reference

1.9   The terms of reference of the WG are to advise the SED on the future development of textbooks and e-Learning resources, including:

(i)   the introduction of e-textbooks and other alternatives; and

(ii)   examining the role of textbooks in supporting student learning and other related practices such as textbook provision, quality assurance and textbook prices in the context of the Curriculum Reform.

Research Methodology

1.10   The WG has examined the development of textbooks and e-Learning resources to formulate future development plans and strategies through the following ways:

(i)   WG regular meetings;

(ii)   focus discussions;

(iii)   open seminars;

(iv)   student forums;

(v)   school questionnaire;

(vi)   collection of parents' views on the web;

(vii)   study of overseas experience and measures;

(viii) school visits;

(ix)   consultation with professional bodies and community groups, including the Curriculum Development Council (CDC), LegCo Panel on Education, school councils, Consumer Council and university academics.

Chapter 2

e-Learning

Introduction

2.1　It has been more than a decade since the former Education and Manpower Bureau introduced the First Strategy on IT in Education in 1998. The Third Strategy launched in 2008[2] symbolised the further integration of information and communication technology into learning and teaching, and the implementation of e-Learning. This chapter will study the current implementation of e-Learning in schools and to depict the vision of e-Learning for the future.

Vision of e-Learning

2.2　The 21st century is an age of information explosion. This IT-led era connects the world through the Internet. The wide application of IT has brought much impact on our society, culture and daily life. It also has an important role in education, changing school education from a largely textbook-based and teacher-centred approach to a more interactive and learner-centred approach. Learners are given more information and are able to observe and explore the world outside school, thus globalised their learning.

2.3　In face of the rapid development and wide application of information and communication technology, governments around the world have invested resources into IT in education and have seen some fruits. Hong Kong has shared the same story. Since 1998, the Government has been determined to promote IT in education. Three strategies on IT in education have been launched and a huge amount of resources have been allocated to make Hong Kong "a leader and not a follower in the information world of tomorrow". The overall goal of all these strategies is to see a "paradigm shift" in school education from a textbook-based and teacher-centred mode to a more interactive

---

[2]Website: http://www.3ited.info

and learner-centred mode.

2.4   The Education Reform in recent years aims to help students achieve whole-person development and acquire an attitude for life-long learning, preparing talents for our society and country, and raising the competitiveness of Hong Kong as an international city. In a knowledge-based society, students need to learn how to learn and acquire generic skills such as communication, creativity and critical thinking. Learning and teaching strategies, if used appropriately with well-defined learning objectives and styles, will give the best results. Professional teachers should know their students and have a wide repertoire of pedagogical strategies. They should be able to adjust their teaching to cater for the needs, abilities and response of students, so as to get students engaged in their learning, think proactively and seek the joy of learning. In line with this development and the paradigm shift of learning and teaching, e-Learning is to use the electronic media to promote various learning and teaching strategies for helping students achieve learning targets. In today's information-rich world, e-Learning not only could promote self-directed learning, cope with students' diversified learning abilities and styles, but also serve as an effective means for students to pursue life-long learning.

2.5   To effectively implement IT in education, many schools are willing to let their students experience different forms of e-Learning like online exercises, e-books, blog writing. But what is e-Learning? We will describe the "paradigm shift" in school education below.
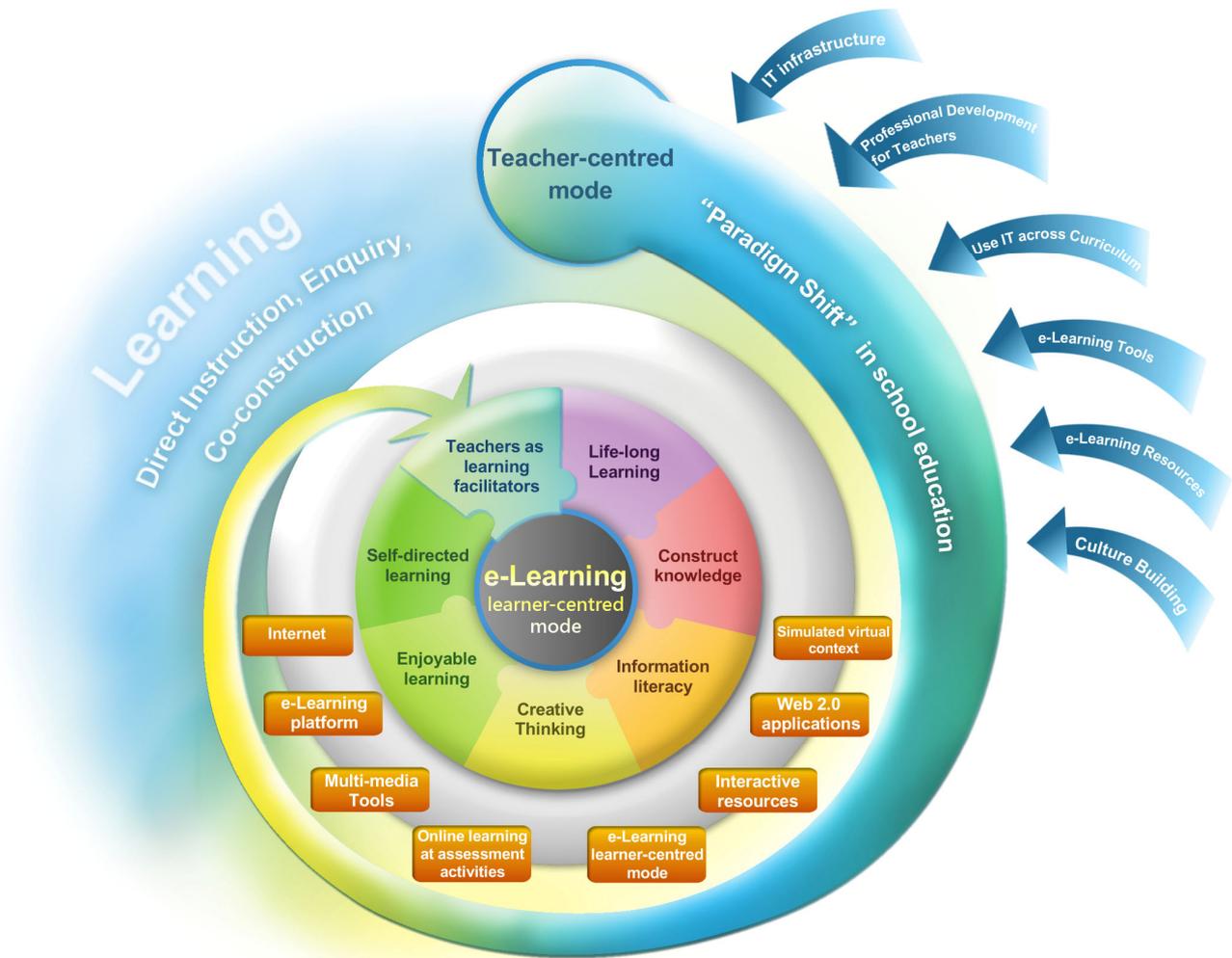
Vision 1: Student-centred and Self-directed Learning

Students will lead the learning process, identify problems, explore the issues and find answers through various electronic media, realising self-directed learning.

Vision 2: Teacher as a Learning Facilitator

Teachers will select appropriate e-Learning resources according to the needs and abilities of students. They will guide students to go through e-Learning in an organised way and to process information to solve problems, helping students to acquire the ability to learn by themselves.

Vision 3: Students as a Life-long Learner with Global Sense

Students will come into contact with information around the world through the Internet and

will find the resources beyond books. They will learn the skills for higher-order thinking and engage in life-long learning.

Vision 4: Students Construct Knowledge through Enquiry and Collaboration

Students will make good use of different online tools for enquiry learning and constructing knowledge with others. They will learn to collaborate with others and share information. This will enhance their communication and collaboration skills.

Vision 5: Students are Information-literate

Students will be able to use different e-Learning resources and to process information comprehensively (searching, evaluating, organising and presenting). They will also know how to select correct information and develop the right attitude for using IT.

Vision 6: Students Demonstrating their Creativity

Students will learn to use different e-tools and their creativity to connect old and new knowledge and show their learning results in varied ways.

Vision 7: Learning Joyfully

With its multimedia, interactive and innovative features, e-Learning will enhance the students' interest of learning and provide an enjoyable learning environment for achieving different learning objectives.

Definition of e-Learning

2.6   The goal of implementing IT in education is to enhance the effectiveness of learning through electronic technology. Effective learning should not be bounded by classrooms. With the aid of technology, e-Learning reaches beyond spatial limit and makes learning more flexible. This combination of technology and learning will enhance the effectiveness of learning, which will benefit students all their life. Technology, learning and daily lives will eventually become one. This

is the focus of life-long learning and whole-person development.
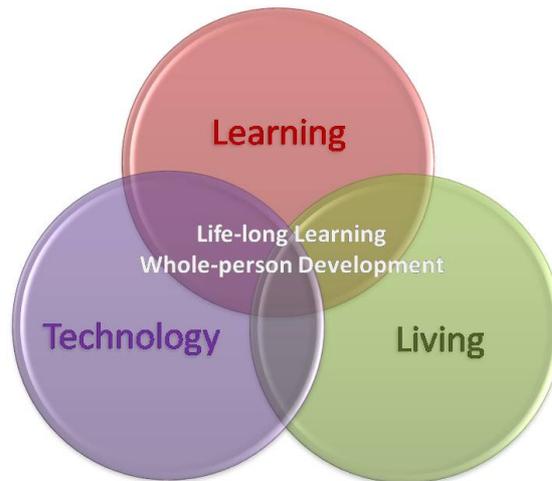
2.7   Someone has given e-Learning an interesting explanation. The small letter "e" means various electronic tools. "Learning", capitalised, is the focus of e-Learning. To put it simply, with the aid of various media of electronic technology such as computer, networks and multimedia, students are placed at the centre of learning. Different learning strategies are deployed to achieve learning objectives. This is the essence of e-Learning: using technology to deliver learning content more effectively. In this way, the letter "e" in e-Learning is more than electronic. It also means efficient, effective and enjoyable.

2.8   On the other hand, **e-tools**, **e-Learning resources**, **e-Learning programmes** are the major elements of e-Learning.

- **e-tools** such as interactive learning platforms, blogs and wiki platforms will enhance the communication between students and teachers as well as among students. They will also help students build a learning community where they can use their creativity to bring learning from classroom into their lives.

- **e-Learning resources** such as e-texts, web pages and multimedia software will enable teachers to tie in different learning strategies and present the abstract concepts in a concrete way. This will enhance students' interest and they can learn and explore on their own in a flexible way.

- **e-Learning programmes** with a focus on customisation and personal experience, will allow

students to take initiative to use different e-Learning resources and engage themselves in online learning. They can understand information with varied learning experiences without being limited by time and space.

All these have shown that e-Learning is made up of many parts. There is no single definition. Effective e-Learning relies on clear goal-setting and appropriate methods adopted to cater for different conditions. e-Learning should not be implemented in one single mode but encouraged to develop in diverse ways.

Features and Advantages of e-Learning

2.9   e-Learning is a global trend. It is actively promoted throughout the world, not only because times have changed, but more importantly, because e-Learning has its merits which are conducive to student learning and enhancing learning effectiveness.

2.10   e-Learning **connects** learners with the world. With the necessary resources, one can obtain information around the world. Its **flexibility** allows users to learn anytime and anywhere. Also, it is **collaborative**, enabling students to learn with others outside classroom.
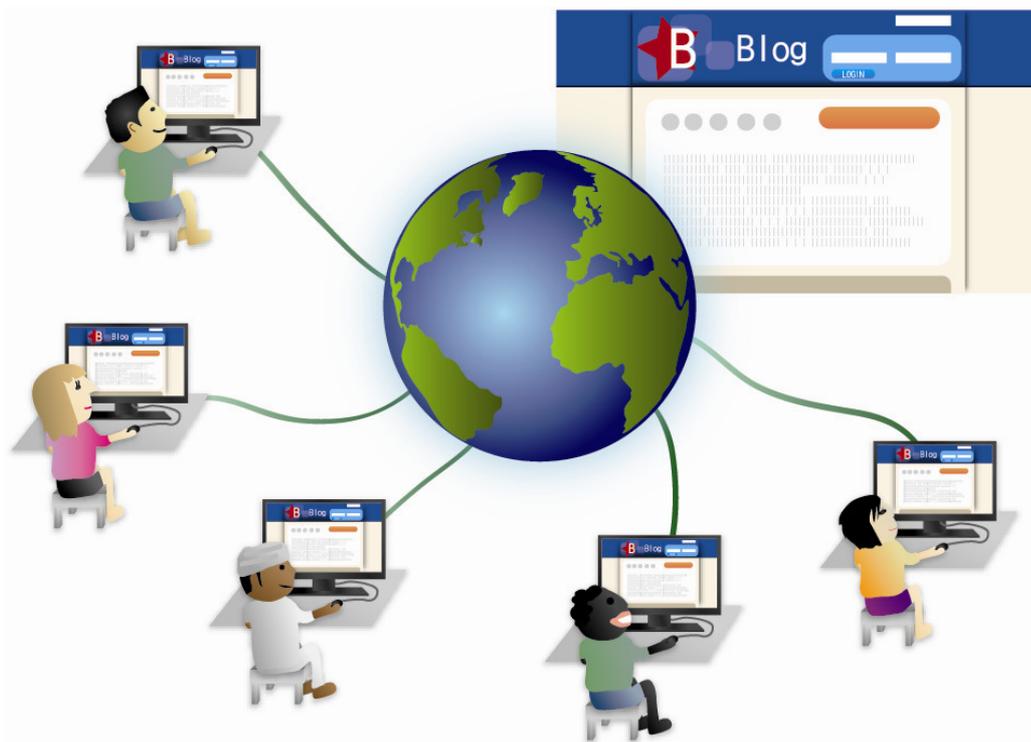
2.11   e-Learning is **interactive**. Its features like multimedia functions, sound effects, animations, and graphics will engage and motivate students. Interactive e-Learning resources will help students understand abstract concepts more readily.
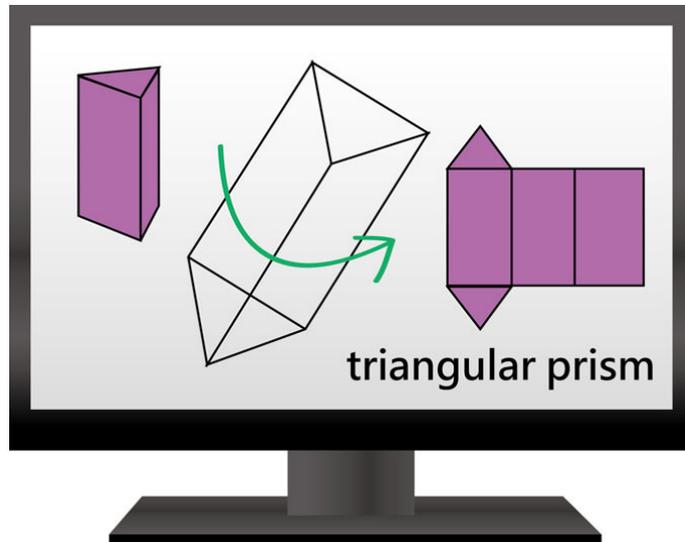
2.12   e-Learning is **extendable**, enabling students to learn outside classroom according to their ability, progress and interest.
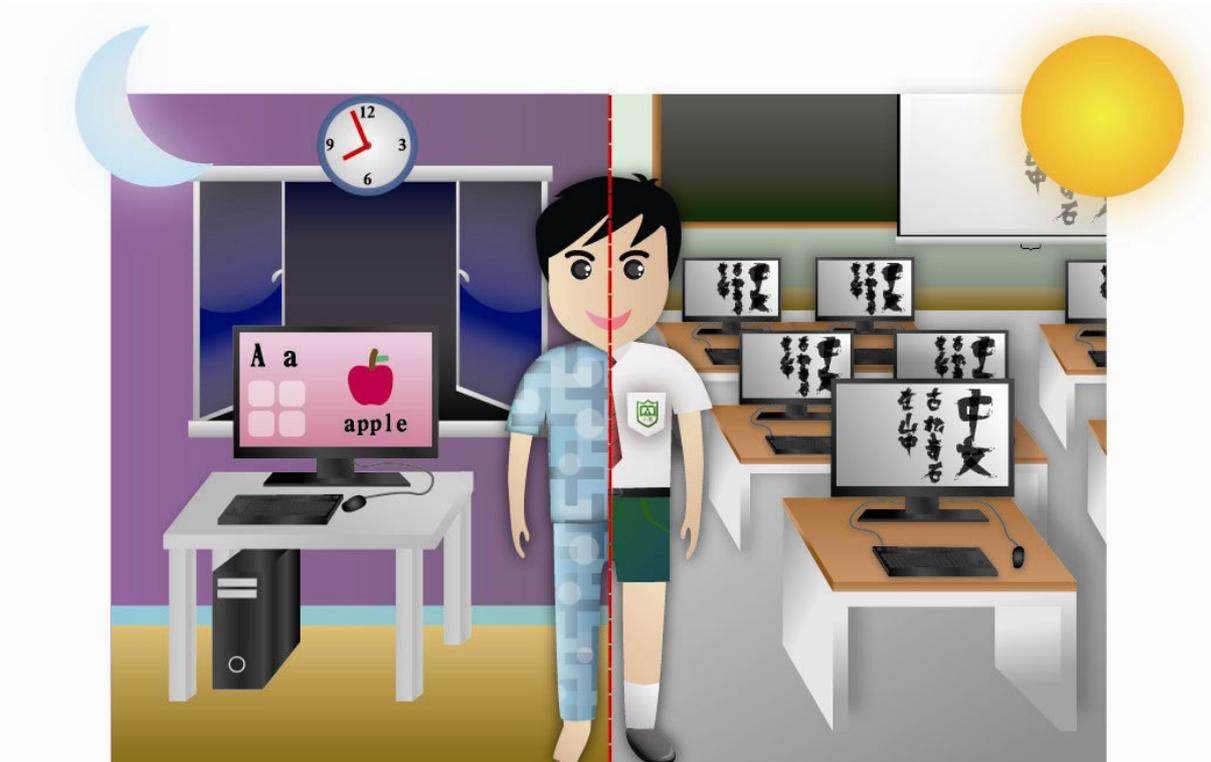
2.13   e-Learning **can simulate the reality**. Sound effect and realization of processes can be presented to the students. Through simulation, they can experience and learn things more readily even for these things that they might have difficulty to reach or encounter.
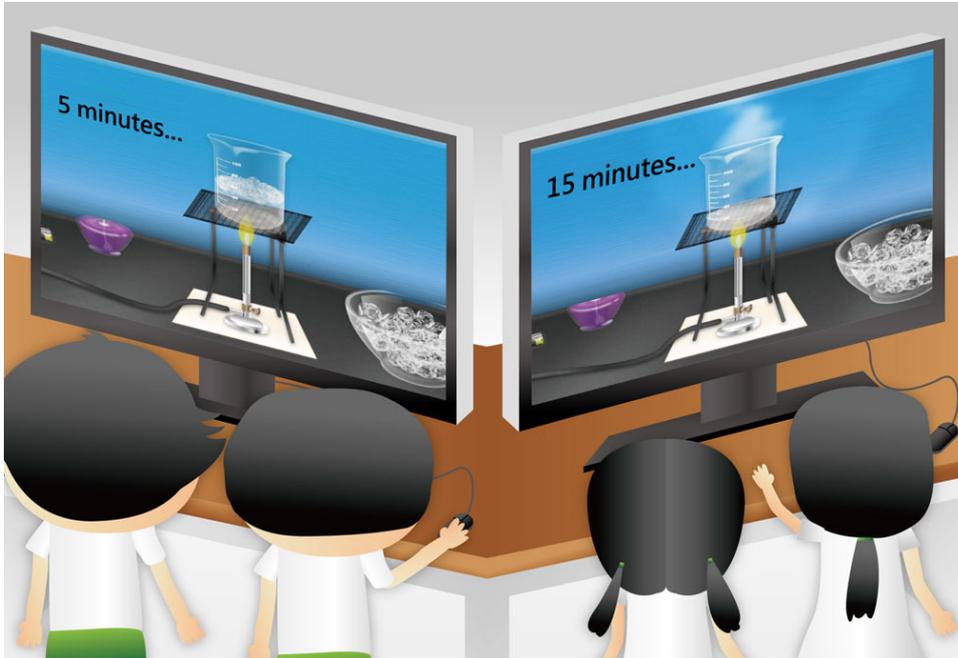
2.14   These features and advantages make e-Learning more effective, efficient and enjoyable as well as catering learners with different needs and style. However, we are not invalidating the value of other tools such as paper, pen, blackboard and realia. Notwithstanding its abovementioned merits, e-Learning will not replace the traditional mode of learning. Both are complementing each other. The key of success is on how to make use of the advantages of the electronic media to benefit the design and planning of learning for using the right technology, at the right time and for the right task.

IT in Education Strategies

2.15   In November 1998, the former Education and Manpower Bureau released a policy paper titled *Information Technology for Learning in a New Era Five-Year Strategy*[3] to launch IT in education in Hong Kong. It stated our goal to use IT in education, turning schools into an energetic and creative environment for learning and enabling students to explore online knowledge and the

---

[3]Website: http://www.edb.gov.hk/FileManager/EN/Content_2309/five%20year%20strategy%2099%20to%2003.zip

information-rich world. We also want our students to acquire the skills to process information efficiently as well as the attitude and ability for life-long learning. To enable teachers to face these challenges, four key components were presented: access and connectivity, teacher enablement, curriculum and resource support, and community-wide culture, with a view to enhancing a "paradigm shift" in school education from a textbook-based and teacher-centred mode to a more interactive and learner-centred mode, a mode that meets the needs and deals with the changes in this new era.

2.16   With the fruit of the First Strategy, the Government introduced the Second Strategy[4] in 2004. It aimed at facilitating the learning and teaching of students and teachers, school leadership and the development of digital learning resources through the application of IT. With respect to the development of digital learning resources, the Electronic Learning Credits (ELC) was given to encourage the purchase of these digital learning resources. Various stakeholders like the schools and the IT sector were encouraged to invest and take part in the development of quality teaching and learning software. The Hong Kong Education City (HKEdCity) was entrusted the work of searching and promoting digital learning resources and to play the role of a market facilitator.

2.17   By the close of 2008, the Government launched the Third Strategy adopting the theme of "Right Technology at the Right Time for the Right Task". Human factors, not technology factors, were highlighted as the key to integrate IT into learning and teaching, as well as to improve the information literacy of students and parents. One of the tasks was to develop the "Depository of Curriculum-based Learning and Teaching Resources"[5], which aims to share practical experiences of using IT in teaching and recommend digital resources suitable for the local curricula. This would reduce teachers' workload in integrating IT in teaching. During the first phase, resources for Chinese Language, English Language, Mathematics and General Studies at primary level would be developed. The second phase would be launched in the 2010/11 school year, covering a few Key Learning Areas at junior secondary level.

---

[4] Website: www.edb.gov.hk/index.aspx?langno=2&nodeID=2497
[5] Website: http://www.hkedcity.net/edb/teachingresources

Present Implementation of e-Learning

2.18   With the implementation of these three IT strategies, e-Learning has become more popular. Development of e-Learning tools such as online learning platforms and teaching software have been activated and flourished. Both teachers and students get used to using IT inside and outside class. Corresponding to this, the mode of learning and teaching has also undergone changes.

2.19   Since the First Strategy, the former Education and Manpower Bureau has strived to help schools implement IT in education in such areas as infrastructure, teacher training, curriculum and resources and learning culture.   After a decade, e-Learning has been gradually integrated into learning and teaching.

2.20   At present, majority of classrooms in a school are equipped with one set of computer connected to the Internet and a projector.   This allows teachers to use multimedia resources such as powerpoint presentations, pictures, videos, audiotapes and animations. This has also brought rich online resources into the classroom.

2.21   One point worth noting is that the focus of each school in their use of IT in education varies. Schools also have different priorities and adopt varied modes. Some stress teachers' professional development and the building of learning culture, while others favour the development of infrastructure and want to achieve "one-person-one-computer" both inside school and at home. Schools in Hong Kong have made good preparation for the implementation of e-Learning.

2.22   Textbooks and other e-Learning resources have been the major teaching and learning materials for teachers and students. Recently, on top of printed textbooks, publishers have provided electronic resources. The contents of textbooks are presented not only in printed format, but also in multimedia format. Students can read printed textbooks and have diversified learning activities with e-textbooks. The electronic resources provided by publishers are usually geared towards teachers, helping them to enhance teaching effectiveness. Powerpoint presentations, videos and animations for teaching are attached. Yet, those which could cater to the learning needs of students are rather

limited. It is true that e-Learning resources can reduce the extent of the use of printed textbooks. However, textbooks still have their explicit values and will not be replaced by e-Learning resources in the years to come.

2.23   Apart from classroom learning, teachers also attach great importance to self-learning and extended learning activities. To enhance learning effectiveness, schools use e-Learning platforms to store various learning resources including powerpoint presentations, online exercises, interactive games, workbooks and homework so that students can use them after school. Some parents would also buy online learning exercises or learning software that are suitable for their children to enhance their learning.

2.24   e-Learning resources are essential to e-Learning. Good resources support will ensure its effective implementation. Thus, the HKEdCity was set up under the Government's First Strategy on IT in education to provide support to teachers in the use of IT in teaching. A resources depository has been set up to collect and share the teaching materials developed by teachers and the EDB, resources designed by tertiary institutions and information provided by non-profit-making organisations. Plentiful materials in the resources depository are available for teachers to choose for attaining their teaching goals. They can organise and integrate these resources for use in class at their discretion.   Undoubtedly, this will help the use of IT in teaching, though a bit time-consuming.

2.25   The Third Strategy stresses the human factor. Its goal is to integrate IT into learning and teaching effectively. In this respect, using quality resources is the key. At present, when implementing e-Learning, teachers need to spend hours to search for resources in the Internet which has increased their workload. To cope with this, the EDB has developed a Depository of Curriculum-based Learning and Teaching Resources which collects free resources, both online and printed, provided by local and overseas government organisations, tertiary institutions, schools and non-profit-making organisations. The contents are selected and organised based on the local curriculum framework. With teaching suggestions and instructions added, the resources are

arranged as thematic units. In each unit, there are videos to explain concepts which can be used in class or for self-learning, interactive simulated scenarios for learning or extension activities, and online exercises with instant feedback as assessment tools or revision exercises. When designing their learning and teaching activities, teachers will only need to download relevant units and adjust them to the abilities and learning progress of their students. An effective e-Learning process can be easily designed. The contents can also be used on an e-Learning platform to enhance learning and teaching effectiveness. For its application, please refer to *Appendix 2*.

2.26   With reference to overseas experiences, governments around the world have introduced e-Learning to schools as information and communication technology developed and became popular in the 1990s. They have produced different e-teaching objects to enrich their learning and teaching process, and to reduce the extent of their reliance on textbooks. They have also developed digitalised textbooks to cut down government expenses on providing textbooks for students in public sector schools. Different countries may have different reasons and different progress for the development of e-Learning.   Yet, they all conclude that multimedia materials such as animations and virtual reality could better help students master knowledge and abstract concepts. Interactive learning tools such as blogs and wiki platforms can allow students to collaborate with others in learning anytime they want. Teachers have also become a facilitator for learning as they can provide timely feedback which will benefit both teaching and learning. e-Learning has been taken as contributing to the "paradigm shift" in school education. This is why governments around the world, in their course of implementing e-Learning, have stressed the professional development of teachers and school leaders, and have encouraged teachers to share their practical experiences. This will help build a quality resources depository which promotes e-Learning and allows teachers to enjoy flexibility when using existing resources. Please refer to *Appendix 3* for further details.

Summary

2.27   One of the objectives of promoting IT in education is to improve the quality of learning

through electronic technology which is in line with the vision of the Education Reform implemented over the years. e-Learning will make learning more efficient, effective and interesting, and help students develop the habit of life-long learning, which in turn facilitates whole-person development. At present, the extent to which various schools have developed e-Learning is different. Further deepening of e-Learning is, therefore, the issue that we should work on. The WG hopes to find out how to implement e-Learning more effectively through reviewing different aspects of e-Learning resources.

Chapter 3

Curriculum Development and Textbook Compilation:
The Current Situation

Introduction

3.1   Textbooks have a close relationship with the curriculum. Apart from being a learning tool, they are also an important learning medium to realise curriculum goals. In exploring the way forward for textbook development, it is therefore essential to have a good understanding of both the current practices in textbook compilation as well as the role of textbooks in the context of the Curriculum Reform. (*Appendix 4* – Textbook Development)

Curriculum Reform

3.2   In the face of the drastic changes in society, rapid technological development and the ever expanding realms of knowledge, the content and modes of learning for students must keep abreast of the times to meet societal needs. The Curriculum Development Council (CDC) conducted a holistic review of the school curriculum during 1999 and 2000 in order to offer a school curriculum that could empower students with the capabilities to meet the challenges of a knowledge-based, technologically advanced, and fast-changing society as well as a highly competitive globalised economy. Based on the public's responses collected during consultation and the Education Commission's visions and proposals as elucidated in *Learning for Life, Learning through Life: Reform Proposals for the Education System in Hong Kong* in September 2000, the CDC published the report on *Learning to Learn – The Way Forward in Curriculum Development* in June 2001 and subsequently the *Basic Education Curriculum Guide – Building on Strengths* in 2002. These documents clearly set out the directions and focuses for future curriculum development in Hong Kong to enhance students' independent learning capabilities so as to achieve the key goals of

whole-person development and life-long learning.

3.3   The 2001 report provides an open and flexible curriculum framework that seeks to help students learn how to learn as well as provide **five Essential Learning Experiences** for primary and secondary school students. These include moral and civic education, intellectual development, community service, physical and aesthetic development, and career-related experiences. All subjects are categorised under **eight Key Learning Areas** (KLAs), i.e. Chinese Language Education, English Language Education, Mathematics Education, Personal, Social and Humanities Education, Science Education, Technology Education, Arts Education and Physical Education. It is also recommended in the report that the **four Key Tasks** of Moral and Civic Education, Reading to Learn, Project Learning, and Information Technology for Interactive Learning be implemented within and across KLAs to help students develop independent learning skills. At the same time, the CDC undertook to develop curriculum guides for each KLA, presenting clearly its curriculum framework and aims, along with its learning targets and focuses.

New Senior Secondary Academic Structure

3.4   Built on the Basic Education Reform and the solid groundwork of effective communications and robust consultations, the New Academic Structure for senior secondary education and higher education, including the New Senior Secondary (NSS) Curriculum, was implemented in September 2009. Under the new system, there will be three years of junior secondary and three years of senior secondary education, followed by four years of university education. With its implementation, all secondary schools in Hong Kong will provide a broad and balanced NSS curriculum to help students build a solid and broad knowledge base, and to facilitate whole-person development and life-long learning. The NSS curriculum framework has three parts:

(i)   Core Subjects: All students are required to study the four Core Subjects of Chinese Language, English Language, Mathematics and Liberal Studies.

(ii)   Elective Subjects: Students are required to take two to three electives from a total of 20

Elective Subjects and a range of Applied Learning courses.

(iii) Other Learning Experiences: To enhance whole-person development, students are expected to gain Other Learning Experiences during or outside class (which accounts for about 15% of the total curriculum time or more) in areas such as Moral and Civic education, Community Service, Career-related Experiences, Aesthetic Development, and Physical Development.

3.5   Under the New Academic Structure, diversified modes of assessment and reporting including school-based assessment, standards-referenced reporting and Student Learning Profile are adopted. These will promote changes in our assessment culture. Because of the close relationship between curriculum and assessment, the CDC and Hong Kong Examinations and Assessment Authority (HKEAA) have jointly developed a curriculum and assessment guide for each NSS subject. After its implementation, the CDC and the HKEAA will regularly review the NSS curriculum for each subject, taking into account the way it is implemented in schools, students' performance in the public examinations and society's changing needs.

Role of Textbooks in the Context of Curriculum Reform

3.6   Textbooks are compiled to help student learn. They should cover the core components and the essential learning elements set out in the curriculum and assessment guide that the CDC has prepared for each subject. The learning materials and activities provided in the textbooks should help students acquire the learning experiences and generic skills advocated in the Curriculum Reform. However, textbooks are no replacement for teachers. Teachers can use textbooks as a tool for developing their own learning and teaching activities. For example, they can exercise their professional judgement to select suitable materials, exercises and tasks from textbooks and complement them with other learning resources (e.g. the media, the natural environment, people,

the Internet and the community). Further, they can develop their own learning and teaching materials that could best cater for their students' needs instead of relying solely on textbooks. Likewise, students should refrain from learning the textbook materials covered in class by rote. Rather, they should integrate them with the ideas from other learning resources to construct their own knowledge, and be prepared to explore topics beyond the textbook content to widen their exposure.

3.7   It is stated in Book 7 of the Curriculum Reform document *Basic Education Curriculum Guide – Building on Strengths* as well as the *Senior Secondary Curriculum Guide - The Future is Now: from Vision to Realisation* that teachers should use their professional knowledge to choose and make good use of textbooks, to adapt the content according to the needs and levels of the students, to decide whether they need to cover everything in the textbook, and to use other teaching resources to support their teaching.

Textbook Compilation

3.8   The textbooks used in Hong Kong are mainly compiled according to the syllabuses/curriculum guides developed by the CDC, the *Guiding Principles for Quality Textbooks*[6], as well as the subject-specific textbook guidelines developed by the EDB. Textbooks play an essential role in contributing to the smooth implementation of the curriculum and education reform in Hong Kong.

3.9   The content of textbooks should be closely in line with the curriculum guide or syllabus for each subject. For this reason, the CDC adopts a multi-stage consultation process in developing a new curriculum and publishes relevant information on the Internet. It also invites textbook editors to attend consultation sessions on curriculum development for effective dissemination of information. At the same time, the EDB organises curriculum briefings and Q&A sessions for publishers to keep them informed of the latest developments so that they can make adequate

---

[6] website: http://www.edb.gov.hk/index.aspx?nodeID=2837&langno=2.

preparation for textbook compilation. After a curriculum guide is finalised, textbook publishers usually have 12 to 14 months to compile textbooks.

Textbook Review Mechanism of the EDB

3.10   To ensure that quality textbooks are available for schools, the EDB has set up a stringent textbook review mechanism. Textbooks submitted by publishers to the EDB for review must have good quality before they could be included in the EDB's *Recommended Textbook List*. There are, however, some subjects for which the EDB does not require textbooks to be submitted for review, i.e. Visual Arts, Integrated Humanities, Literature in English, Liberal Studies, Technology and Living, Health Management and Social Care, and Music (Secondary 4 to 6). For these subjects, the EDB does not recommend the use of textbooks because they are better learnt through primary source materials, or because the content they cover is far too extensive or because there is the frequent need for updates in content in order to keep pace with the rapid developments in the field. Save for these exceptions, all primary and secondary school textbooks for all other subjects will have to be submitted for review if the publishers wish to include them in the *Recommended Textbook List*. For each subject that accepts textbooks for review, the EDB has set up a textbook review panel consisting of in-service teachers, panel chairs and other education professionals. The review panel will analyse the comments and grades given by each reviewer in detail before deciding whether the submitted textbooks are "to be included in the *Recommended Textbook List*" or "not to be included in the *Recommended Textbook List*".

3.11   In summary, textbooks will be included in the EDB's *Recommended Textbook List* only if they have reached an acceptable standard in meeting the following core criteria:

(i)   Compatibility with the aims / learning targets / objectives / guiding principles laid down in the curriculum guide / syllabus;

(ii)   Coverage of the core learning elements as specified in the curriculum guide / syllabus;

(iii)   Accuracy, clarity and relevance of information and data / concepts;

(iv)   Appropriate and logical organisation of content / sequencing of concepts;

(v)   Inclusion of learning activities essential to achieving the learning targets; and

(vi)   Language accuracy.

3.12   Under the existing review mechanism, the EDB will review printed textbooks only. e-Learning resources, including e-textbooks, will not be accepted for review because the flexible and changeable nature of these resources, together with their extensive content, makes it difficult for effective review to be carried out under the present system.

Textbook Revision under Existing Review Mechanism

3.13   **Reprint with minor amendments** is to revise a minor part of the content of the textbook (e.g. outdated information) and reprint it, while **revision** is to make major amendments to the textbook. Under the existing review mechanism, publishers can apply for revision of any textbooks in the *Recommended Textbook List* as either **reprint with minor amendments** or **revision** with the EDB.

3.14   "Reprint with minor amendments" is different from "revision". Textbooks seeking "reprint with minor amendments" must go through the EDB's review before they can be reprinted. No changes should be made to the outward form of the reprinted textbooks (including the cover, title, size and number of pages). The publishers should provide schools, which have adopted their textbooks, with information regarding the amendments for free so that even students who rely on used books are aware of the changes. Besides, schools should state in the textbook lists that the old edition of a textbook can still be used for students' reference.

3.15   Under the existing review mechanism, the EDB only accepts applications for revision of textbooks which have been included in the *Recommended Textbook List* for more than three years (except for the subjects of Social Studies, Economic and Public Affairs, and Government and Public

Affairs). Further, applications will only be approved if there are sufficient justifications for textbook revision and if significant improvements have been made in the proposed revised content, e.g. the revised content will enhance the development of generic skills and thinking abilities, the overall learning of students, or enable students to have a more in-depth understanding of the subject.

3.16   To provide students with quality education, to enhance their learning ability, and to develop their skills of learning to learn so that they can effectively meet the challenges of our knowledge-based and highly competitive society, the EDB should keep abreast of the times and, when appropriate, reform or renew the curriculum. In the light of the Curriculum Reform, the new primary and secondary curricula developed were gradually implemented in schools between 2000 and 2006. (Please refer to *Appendix 5 -* Implementation of Various Subject Curricula under the Curriculum Reform Framework)

3.17   The curricula were implemented progressively by subject and on a **level-by-level** basis. Accordingly, the textbooks catering for the new curricula of different subjects were also progressively adopted by students on a level-by-level basis. Unfortunately, this is often misinterpreted by parents and the public as the **curriculum being revised every year** and as the lack of monitoring by the EDB so that publishers can **revise textbooks every year**.

3.18   Whether it is a new textbook for a new curriculum, or a "reprinted (one) with minor amendments", or a "revision", the public regards these attempts unanimously as "textbook revision". In general, the public seems to have formed the impression that textbooks are being revised frequently or even "every year". Nonetheless, action has been taken all along to prevent publishers from revising textbook content too frequently and making unnecessary revisions which will affect students who rely on used books and increase the financial burden of parents. As early as 1980, the former Education Department laid down the rule that "textbooks once included in the *Recommended Textbook List* shall not be revised within three years", which all textbook publishers should adhere to. With the EDB strictly enforcing the rule, textbook publishers monitoring each other, and the Consumer Council conducting an annual survey on textbook revision, both internal

and external monitoring measures for the textbook market are firmly in place. The Consumer Council has found that the revised textbooks they inspected every year have all complied with the "three-year rule of no revision". Its reports stated that most revisions in recent years were either "needed" or "rather needed". The EDB has not received any reports from schools or textbook publishers on any textbooks not complying with the "three-year rule of no revision".

3.19   The following table lists the revision applications for primary and secondary school textbooks in the 2005/06 to 2008/09 school years which adhered to the "three-year rule of no revision". From the table, it can be clearly seen that the number of applications for revision approved by the EDB in recent years has substantially decreased.

School year	Number of primary and secondary school textbooks in the *Recommended Textbook List*	Number of textbook revisions applied			Number of textbook revisions approved		
		Primary schools	Secondary schools	Total	Primary schools	Secondary schools	Total
05-06	516 sets	6 sets	23 sets	29 sets	6 sets	19 sets	25 sets
06-07	525 sets	1 set	20 sets	21 sets	1 set	14 sets	15 sets
07-08	514 sets	11 sets	9 sets	20 sets	9 sets	5 sets	14 sets
08-09 (until July 2009)	443 sets (not including NSS textbooks)	2 sets	7 sets	9 sets	0 set	5 sets	5 sets

Measures to Reduce Textbook Prices and Alleviate Parents' Financial Burden

3.20   Following the principle of non-interference with the free market economy, the EDB has implemented various measures to reduce textbook costs and alleviate parents' financial burden. These measures include:

(i)   continuously appealing to textbook publishers to share the hard times with the public by not substantially increasing textbook prices, and urging them to uphold their

integrity and adhere to their proper code of business practice by not providing schools with any form of advantages, donations (including equipment, teaching aids, computer software and free on-site services), free gifts or luxurious hospitality during textbook promotion, so as to avoid transferring the related costs to the public when pricing textbooks;

(ii) issuing the Guidelines for Printing of Textbooks[7] to publishers for reference, and requesting them to adopt the "functional and cost-effective approach" by making use of appropriate printing methods, as well as paper and design with low-cost features to reduce production costs; and

(iii) issuing to schools a Circular Memorandum on Notes on Selection of Textbooks and Learning Materials for Use in Schools [note: the number of the 2009 Circular Memorandum is: EDBCM052/2009] and organising an annual seminar for teachers, providing guidelines and recommendations to schools on how to select suitable textbooks and help students reduce textbook expenses. Some of the recommendations are:

➢ Schools should select textbooks and learning materials that meet the learning needs and abilities of the students, and should avoid increasing parents' financial burden.

➢ Schools should set up subject/KLA textbook selection panels to choose appropriate textbooks for students. Each panel should consist of all teachers of the subject/KLA.

➢ Schools should not accept any advantages or donations from textbook publishers to prevent publishers from transferring the cost to the public when pricing textbooks.

➢ Schools should take into consideration the price of textbook and its design (i.e. whether the price is low or the design is simple), in addition to content quality, when selecting textbooks.

➢ Teachers should be encouraged to exercise their professional knowledge and

---

[7] Website: http://www.edb.gov.hk/index.aspx?nodeID=2837&langno=2

pedagogical innovativeness to design suitable learning materials, and supplement these materials with the EDB's free online teaching resources as well as authentic materials related to our everyday life so as to enhance teaching effectiveness and reduce reliance on textbooks.

➢ Schools should state clearly the edition of the textbooks in their textbook lists to help parents decide whether they will buy new or used textbooks. If "reprinted textbooks with minor amendments" are adopted, schools should state clearly, in the textbook lists and against the textbook title, that the "old edition can still be used". They should also distribute the corrigenda provided by publishers to students who rely on used textbooks.

➢ Schools should consider placing some copies of reference materials, such as dictionaries and maps, in the classroom for students' use. It should be stated in the textbook lists that if students already have similar reference materials, they can decide whether or not to buy those in the textbook list.

➢ Schools may arrange to buy in bulk story books or other learning materials which can be used by students on a rotational basis, and share the cost among students. Alternatively, schools may use the Extensive Reading Grant to buy story books for students.

➢ Schools are encouraged to organise donation activities of used books. This will not only raise students' environmental awareness, but also help alleviate parents' financial burden.

(iv) Continuing to develop diversified learning and teaching materials as well as online resources to deepen students' interest in learning and enhance teaching quality. To support those NSS subjects, such as Liberal Studies, for which the CDC does not recommend any textbooks and for which the EDB will not conduct textbook review, the EDB will develop and provide e-Learning resources and other relevant information and websites. These resources are produced by the Curriculum Development Institute

either solely or jointly with other organisations. For example, the e-Learning resources for Liberal Studies will be placed at the "Web-based Resource Platform for Liberal Studies" of the HKEdCity for teachers' use. To support the implementation of the NSS curriculum and to encourage the use of diversified teaching materials, the EDB has provided online learning and teaching resources for some NSS subjects (e.g. Health Management and Social Care, Technology and Living) in addition to the textbooks produced by publishers. These resources have been uploaded onto the EDB webpage containing the New Senior Secondary Learning and Teaching Resource Lists.[8]

3.21   According to a recent survey conducted by the Consumer Council, there has been a slight drop in textbook prices. The expenses on textbooks for primary and secondary schools have decreased by 0.6% and 0.5% respectively.

3.22   The School Textbook Assistance Scheme of the Student Financial Assistance Agency (SFAA) provides textbook assistance to primary and secondary students who are financially in need. It covers textbooks and miscellaneous school-related expenses for students from government, aided, caput and local schools under the Direct Subsidy Scheme. Textbook assistance consists of two components: (1) textbook subsidy, and (2) fixed subsidy. The textbook subsidy is adjusted annually based on the average textbook expenses of each level, while the fixed subsidy covers all school-related expenses such as those on buying workbooks. The Consumer Price Index announced in June every year will also serve as reference for the adjustment. Students who receive assistance can use the grants flexibly for direct purchase of books, workbooks and the like. In the 2008/09 school year, a total of 294,037 students benefited from the Scheme and the amount of assistance provided was $470 million. Since the 2006/07 school year, the SFAA has requested schools to submit their nominations of disadvantaged students before the start of the school year so that they can process the applications as soon as possible and disburse the grants to the students before the

---

[8]   Website: http://crc.edb.gov.hk/crchome/tc/nssl&tresourcelists.htm.

school year starts. Please refer to the SFAA webpage for details.[9]

3.23   The Social Welfare Department (SWD) also provides full-time students of primary or secondary schools, and those of technical/commercial institutions receiving the Comprehensive Social Security Assistance (CSSA), with a grant for selected items of school-related expenses, including textbooks. In the 2008/09 school year, 119,048 CSSA students received this grant, which amounted to a total of $360 million.

3.24   Textbook prices cover textbook costs and the costs of complementary teaching materials which publishers provide to schools. This bundled sale or purchase of textbooks and complementary teaching materials is, however, undesirable. To the WG's knowledge, in the process of textbook promotion, textbook publishers usually offer their "service" to schools in the form of a set of complimentary teaching tools and materials. These include teachers' handbooks, question banks, CDs for teaching, teaching aids and wall charts. As different schools have different needs on teaching materials, such free provision of teaching materials by publishers will inevitably result in wastage.

Summary

3.25   Textbooks are important learning tools for students. Quality textbooks can help students to learn, enhance their learning effectiveness, broaden their knowledge, and develop their ability of learning to learn. However, expensive textbooks have imposed a heavy financial burden on parents. Although the Government has, under the principle of non-interference with the free market, implemented various measures to reduce textbook costs and curb increases of textbook prices so as to alleviate parents' financial burden, the effect has been far from satisfactory. By reviewing the various aspects of textbook development with all parties concerned, the WG hopes to maximise students' benefits without compromising textbook quality, and to make effective recommendations

---

[9]Website: http://www.sfaa.gov.hk/tc/schemes/fts.htm.

on how to enhance textbook publishing and reduce textbook prices so as to provide students with quality and affordable textbooks and learning materials.

Chapter 4

Work Report

Introduction

4.1   The development and use of textbooks and e-Learning resources are a complicated issue. Using a range of strategies to collect views and information, the WG had provided members with a comprehensive picture to facilitate discussions and to formulate recommendations. A total of nine meetings were held, where the issues of textbook provision, pricing, and feasibility of developing e-Learning resources for wide adoption in schools, were discussed in depth. The WG also conducted three open seminars, two student forums and a school questionnaire survey to collect views from the public, school principals, teachers, students and parents, covering a variety of topics which included the quality, pricing and development of textbooks, the recycling of textbooks in schools, and the development and use of e-Learning resources. To gather more views from parents, the WG invited them to submit their views through the HKEdCity's electronic platform. Apart from reporting their work progress to the CDC and LegCo Panel on Education and seeking their advice, the WG also visited schools experienced in using e-Learning resources to gain first-hand understanding of how they could be applied to promote interactive learning and teaching in class.

Student Forums

4.2   In February 2009, the Hong Kong Federation of Youth Groups and the WG jointly organised two student forums. The first forum discussed "the current use of e-Learning resources among young people" and "the vision of young people about e-Learning resources", while the second forum focussed on "the use of e-Learning resources in various Key Stages". Most student participants supported the implementation of e-Learning. A summary of the views from the student forums is attached at *Appendix 6*.

Open Seminars

4.3   From February to March 2009, the WG held three open seminars to collect public views. The seminars consisted of two parts. Part One was on the quality, development and pricing of printed textbooks. Part Two was on the modes of development for e-Learning resources.

4.4   Suggestion boxes were provided to collect written views from the public on the current situation of textbook and e-Learning resources development as well as the use of e-Learning resources.

4.5   On the whole, the written comments corroborated with those expressed during the seminars. It was generally felt that the weight, thickness and price of textbooks could be reduced. Further, instead of giving undue emphasis on the implementation of e-Learning resources, it was believed that they should be used together with conventional textbooks to enhance learning and teaching effectiveness. Other topics like the price of e-Learning resources, their effect on student health and professional development for teachers were also among the public's concerns. For a summary of the views collected during the seminars, please refer to *Appendix 7*.

School Questionnaire

4.6   School principals and teachers are major contributors to student learning. Their views on education policies are therefore very important. The WG had launched an online school questionnaire on the HKEdCity website to collect their views on the quality, pricing and provision of textbooks, as well as the development and use of e-Learning resources. All school principals and teachers in Hong Kong were invited to log on to their accounts at HKEdCity between 10 March and 10 April 2009 to complete the questionnaire. Approximately 48% of the schools in Hong Kong, i.e. 3,106 school principals and teachers from 537 schools, responded. For details of the questionnaire findings, please refer to *Appendix 8*.

Collection of Parents' Views on the Web

4.7   The WG understands that parents care about their children's education and that their support and engagement are necessary in the process of policy formulation. As a result, the WG set up a platform at the HKEdCity website from 27 April to 20 June 2009 to collect their views on the quality, pricing and provision of textbooks as well as the development and use of e-Learning resources. To encourage greater online participation, the WG sent an invitation letter to parents through schools. In total, 12,337 parents' views were collected. For details regarding their views, please refer to *Appendix 9*.

Consultation with Professional Bodies and Community Groups

4.8   Regarding the direction in which the development of textbooks and e-Learning resources should take, the WG reported its work progress to the CDC and LegCo Panel on Education and sought advice from them.

4.9   The EDB, Consumer Council, textbook publisher associations, school councils, community groups and green groups presented their written comments on the prices of textbooks, the modes of publication and the future development of e-Learning resources to the LegCo Panel on Education, a brief summary of which can be found at *Appendix 10*.

School Visits

4.10   All schools in Hong Kong are equipped with IT facilities and have implemented e-Learning resources to varying degrees. Some of our members had visited schools that applied e-Learning resources in both learning and teaching, and gained an understanding of how they actually worked in class. Schools that made good use of e-Learning resources not only managed to create space for effective learning, but were also able to cater for students' diverse needs and abilities. These success stories can serve as examples for textbook publishers and schools as they collaborate on the

development of e-Learning resources.

Meeting Discussion

4.11   Taking into consideration overseas practices in textbook development and provision (please refer to *Appendix 11*), as well as the school questionnaire findings and the parents' views collected on the web, the WG had thoroughly discussed the following issues:

> (i)   textbook review mechanism;
>
> (ii)   selection and use of textbooks in schools;
>
> (iii) textbook cost and pricing;
>
> (iv)   textbook revision;
>
> (v)   textbook recycling plan;
>
> (vi)   current implementation of IT in education in schools;
>
> (vii) current development of EDB's IT in education strategies, and the way forward;
>
> (viii) impact of e-Learning resources on students' eyesight;
>
> (ix)   strategies and measures for introducing e-textbooks/e-Learning resources;
>
> (x)   copyright of e-textbooks/learning resources;
>
> (xi)   learning and teaching resources depository pilot scheme.

Chapter 5

Discussions and Recommendations

Introduction

5.1   Since its set-up, the WG has collected information, data and comments through various channels and has made reference to international practices and experiences. Nine meetings were held to discuss relevant issues and make feasible recommendations. All members have agreed that their discussions should focus on student learning and that their ultimate goal is to enhance students' learning effectiveness; to enable them to develop positive attitudes and the abilities of learning to learn; as well as to promote whole-person development and life-long learning. The issues the WG has discussed and its recommendations are presented below.

e-Learning

Focus of discussion:

1. **Should e-Learning be fully implemented in schools? And how?**

2. **What support measures should be provided to sustain the development and implementation of e-Learning?**

3. **What are the long-term strategies to be taken by the Government regarding the implementation of e-Learning?**

5.2   The WG has found that the public has high expectations about e-Learning. They believe that e-Learning can effectively prepare our future generations for the challenges of our Age of Information. Further, to ensure the successful implementation of e-Learning, they believe it is essential to have a clear definition, vision and goal of e-Learning. Efforts should then be made to systematically develop it, taking into account various factors such as stakeholders' (teachers' and parents') degree of acceptance, teachers' pedagogical needs and the e-Learning resources and

technical support available.

5.3   e-Learning is an open and flexible learning mode. It allows students to construct knowledge through interacting with the sources, as well as co-construct knowledge in collaboration with their peers, which makes learning more interesting and effective. We hope that students will develop their capabilities for self-directed and life-long learning, as well as master the skills to search, select, evaluate and apply information to solve problems through e-Learning. Through learning to communicate and collaborate with others to construct knowledge using the Internet, they will also broaden their horizons. All these are essential skills and qualities that our young people need to have. Besides, e-Learning can be flexibly used to cater for students' diverse needs and learning styles. All WG members and stakeholders agree that e-Learning is a growing trend in schools and will become a major learning mode in the future.

5.4   The public generally accept e-Learning but they have concerns in relation to the support measures. As their understanding of e-Learning varies, their expectations of the support measures are different. Generally speaking, the sustainable implementation of e-Learning will depend on three conditions: (1) pedagogies and teachers' professional development; (2) availability of e-Learning resources; and (3) hardware and technical support.

5.5   **Pedagogical strategies and teachers' professional development**: Human factors directly affect the implementation of e-Learning. The findings from our questionnaire have shown that most teachers believe that they have sufficient IT knowledge and skills. On different occasions, many stakeholders have observed that the successful implementation of e-Learning hinges upon whether teachers can adopt appropriate learning and teaching strategies and create a flexible, interactive and student-centred learning environment to meet the learning objectives and students' needs.

5.6   **Availability of e-Learning resources:** Many stakeholders believe that the success of e-Learning depends on the availability of quality e-Learning resources. Although at present there is a huge amount of e-Learning resources available for free online, our stakeholders believe quality

comes before quantity. We are in need of comprehensive e-Learning packages which complement the curriculum and provide useful learning materials in lessons, as well as sources of reference for further inquiry outside lessons.

5.7 **Hardware and technical support:** In the open seminars, the participants proposed various models for implementing e-Learning and relevant support measures. Some thought that students must increase their exposure to, and use of, e-Learning resources. Thus, a "one-person-one-computer" learning environment was necessary. However, some suggested that a "one-group-one-computer" learning environment, when appropriately used, could enhance collaboration and peer learning. Whichever mode of the implementation is adopted, hardware and technical support provided to schools should be enhanced if e-Learning resources are to be more widely used in learning and teaching.

5.8 Based on practical experiences in implementing e-Learning and stakeholders' expectations, e-Learning should be implemented in a diversified manner rather than in one single mode. The WG recommends that the Government should launch a pilot scheme to look into the suitable modes of implementing e-Learning as well as the necessary support measures. The Pilot Scheme serves to: (1) develop, test and evaluate different teaching practices; (2) understand the extent of teachers' need for e-Learning resources and support services; (3) understand the infrastructure and technical support that schools require (e.g. the optimal student-computer ratio when using e-Learning resources); (4) understand the challenges schools will face when e-Learning are widely used on strategic school development (e.g. curriculum design, teachers' professional development, resources management, and school-parent cooperation), so as to facilitate the development of an e-Learning mode unique to Hong Kong.

5.9 Regarding the implementation arrangements of the pilot scheme, the WG has made the following remarks for government's reference:

(i) Start with primary schools first and then secondary schools;

(ii)   When implementing the pilot scheme, an open invitation will be sent to ask schools to submit proposals on e-Learning implementation. The EDB will vet their proposals and decide whether to approve them and provide the successful schools with funding;

(iii)   The EDB should exercise necessary coordination to ensure that a range of different types of schools, subjects, and implementation models are included in the pilot scheme;

(iv)   Schools in the pilot scheme may invite academics to conduct research studies to evaluate students' learning effectiveness after the implementation of e-Learning;

(v)   The pilot schools should collaborate with relevant sectors (e.g. the publishing sector and the IT sector) to develop e-Learning resources and technical solutions;

(vi)   The Government may set up a steering committee as well as encourage and support the industries to set up a cross-sector working group. The duties of the steering committee include providing guidance and support for the pilot schools and evaluating the outcome and effectiveness of the pilot scheme, as well as making recommendations to the Government on the strategies for the full implementation of e-Learning.

5.10   The pilot scheme aims to pave way for the long-term implementation of e-Learning through developing the conditions for success as stated in paragraph 5.4. To start with, pedagogies that enhance e-Learning will be developed. Successful experiences and examples of good practice will be identified and shared in professional development programmes to help teachers master the approaches.

5.11   The WG believes that the sustainable development of e-Learning resources requires the joint efforts of various sectors. Textbook publishers or the IT sector can work with the pilot schools and academics to develop practical and pedagogically-sound e-Learning resources, as well as a mode of operation that suits schools' needs, a synergy that could break new ground in the e-Learning resources market. To parents, as long as students are able to use e-Learning resources effectively, the money spent on printed learning materials will be shifted to the use of computers and e-Learning materials. This will not cause any drastic change in their expenditure on learning

materials.

5.12   The existing IT infrastructure in schools is sufficient to provide an appropriate environment for implementation of various modes of e-Learning. Apart from the existing recurrent subsidy for setting up an interactive learning environment, the Government should consider providing non-recurrent grants, where necessary, to strengthen the IT infrastructure in schools. In addition to the conditions stated in paragraph 5.4., the long-term implementation of e-Learning requires the cooperation and support of various parties, especially parents and the business and industry sector. Their support would provide favourable conditions for e-Learning to develop into a major learning mode.

5.13   After considering various comments and factors, the WG has made the following recommendations:

---

1.   e-Learning should become the major mode of learning in the future. The mode adopted should be diverse rather than inflexible or single-faceted.

2.   In order to look into how e-Learning should be implemented in class as well as support measures needed, the Government should launch a pilot scheme to support schools which are keen on developing e-Learning so that they can try out e-Learning based on their experiences and ideas.

3.   Schools joining the pilot scheme should collaborate with relevant sectors to develop pedagogy for e-Learning, promote teachers' professional development, develop IT infrastructure and support measures as well as develop the market for e-Learning resources.

4.   The Government may consider setting up a steering committee as well as encourage and support the relevant sectors to form a cross-sector working group. Apart from supervising the implementation of the pilot scheme, the duties of the steering committee will also include evaluating the outcomes and effectiveness of the pilot scheme and making recommendations to the Government on the long-term strategies on the full implementation of e-Learning. The cross-sector consortium will endeavour to promote collaboration and partnership among schools, the publishing sector and the information technology sector with a view to enhancing the effectiveness of the pilot scheme.

5.   The sustainable development of e-Learning depends on the co-operation and joint efforts

---

> *of various sectors to give appropriate support. The Government should take the lead to create an appropriate environment for e-Learning and make it become students' major mode of learning.*
>
> *6.   The Government should formulate concrete measures to ensure that all students can participate in e-Learning regardless of their socio-economic status, physical or intellectual status.*

e-Learning and e-Learning Resources

Focus of discussion:

1.   What kinds of learning resources are required to support e-Learning?

2.   Are existing e-Learning resources sufficient?

3.   Who should be responsible for the quality assurance of e-Learning resources?

5.14   e-Learning generally refers to a learning and teaching strategy that seeks to achieve learning objectives through the use of electronic media. The technological media for e-Learning refer to a range of different things, e.g. computer programmes, online community sharing and collaboration tools, and multi-media e-Learning resources that present basic learning content in an interactive way. The WG realised at its initial stage that the public took e-Learning resources to mean just e-textbooks or digitalised printed matter which could be read with an e-reader. In the light of this, the IT sector has provided many technical solutions for the WG's consideration. However, the education sector holds a broader view. They deem that a wide variety of interactive e-Learning resources could facilitate learning, although some of them feel that e-Learning resources cannot totally replace conventional textbooks which are convenient and more affordable.

5.15   e-books or e-textbooks are only one type of e-Learning resources. Overseas experiences have told us that digitised texts may have some financial advantages but may not enhance learning effectiveness. More interactive learning materials must be developed. e-Learning resources may take many forms, including electronic materials such as e-texts, pictures, audiotapes, videos and

animation. They may be on-line materials ranging from well-designed and well-supported packages on specific topics to interactive web courses. These digital resources have the following features: multimedia, highly transmittable, malleable and reusable. The last two features enable teachers to tailor the materials to suit students' diverse needs, abilities and learning styles.

5.16   During the consultation, many have suggested that the successful implementation of e-Learning hinges on the availability of quality e-Learning resources for teachers' selection. The questionnaire referred to in paragraph 5.5 has shown that teachers generally agree that e-Learning resources can enrich learning experiences and facilitate the teaching of complicated concepts. They also believe that they can enhance students' interest in learning and their self-learning ability. Some stakeholders have mentioned that there is room for development in terms of both the quality and quantity of the e-Learning resources currently available. Despite the huge amount of e-Learning resources available for free on the Internet, their quality varies and many are not designed in accordance with the local curriculum. Teachers, therefore, have to spend much time searching, selecting and organising resources from different sources to design suitable learning activities for the effective implementation of e-Learning. Some teachers have said that what we need at present are some comprehensive e-Learning packages which provide useful learning materials in class, as well as sources of reference for further inquiry outside class.

5.17   The WG believe that the reason why teachers have not fully utilised e-Learning resources is that the existing e-Learning resources cannot fully complement the way the curriculum is organised and implemented in schools. In the light of this, the EDB and the HKEdCity should step up their efforts in re-organising the existing e-Learning resources.

5.18   As for quality assurance, it has been suggested that the Government or some professional bodies should assess the appropriateness and quality of e-Learning resources for teachers' reference. It has also been pointed out that in this age of Web 2.0, Internet users should ensure the effective use of online resources through online experience sharing.

5.19　The WG has had much discussion over the issue of quality assurance for e-Learning resources. Members believe that the conventional quality assurance mechanism may not be effective, given the high level of adaptability, flexibility and changeability of these materials. Teachers or professional education bodies are, therefore, encouraged to take into full account the unique features of e-Learning resources, share expertise and work together to improve the quality of e-Learning resources.

5.20　The WG considers that learning resources should be diversified. At present, teaching is largely based on printed resources supplemented by e-Learning materials. However, the use of e-Learning resources as a medium for learning and teaching both inside and outside class is gaining increasing popularity and has become a global trend. Printed textbooks and e-Learning resources should co-exist and complement each other.

5.21　After considering various comments and factors, the WG has made the following recommendations:

1.　*Stakeholders should adopt an open attitude towards using learning resources, whether the comparison is between conventional textbooks and e-Learning resources or between different types of e-Learning resources.*

2.　*The choice of learning resources should be geared to providing students with the best mode of learning, and the most effective learning environment.*

3.　*In order to facilitate teachers to select the appropriate e-Learning resources that support curriculum implementation and to provide relevant teaching suggestions, the Government should consider, as a short-term measure, deploying additional resources to strengthen and expedite the development of the Depository of Curriculum-based Learning and Teaching Resources.*

4.　*An on-line teacher community should be set up on the HKEdCity to facilitate the exchange of views regarding the use of e-Learning resources and development of a professional peer review culture with a view to improving the quality of e-Learning resources.*

---

e-Learning Resources Market Development

Focus of discussion:

1. **What actions should be taken to promote the development of the market for e-Learning resources?**

2. **What is the role of the Government in developing the market for e-Learning resources?**

5.22   As mentioned, the use of e-Learning resources is gaining popularity and has become a global trend. The pace and direction of further development of e-Learning resources should gear towards providing the best learning mode and environment to students.

5.23   Textbook publishers have mentioned on various occasions that since the implementation of the First Strategy for IT in Education, they have devoted themselves to developing e-resources for teachers' use. However, the role of e-Learning resources in students' learning is yet to be defined. A formal framework and a clear direction for development are much desired. Over the years, government and non-governmental organisations have developed many free e-Learning resources. Publishers hope that duplication of efforts will be avoided and that such free resources will not hinder their business development. Other forms of support, including tools for enhancing teaching process and other classroom learning/teaching practices will take time to develop.

5.24   On the other hand, the IT sector specialises in system platforms and media development. It is believed that they could contribute much to the development of e-Learning resources.

5.25   The WG agrees that the plan for promoting the use of e-Learning resources is to be devised. This is in line with the goal of the pilot scheme mentioned in paragraph 5.9. The WG hopes that textbook publishers and the IT sector will make full use of their expertise and collaborate closely with schools in developing e-Learning resources that will suit the needs of students in order to establish a sustainable market for e-Learning resources.

5.26   In compiling e-Learning resources in the future, the EDB and the HKEdCity should avoid

duplication of efforts which might hinder the development of e-Learning resources for commercial purposes. The HKEdCity should exercise its role as a market facilitator and establish a one-stop business platform to provide services such as product display, sales, digital rights management and payment gateways for online transactions of e-Learning resources. As a short term measure, the Government may also consider providing schools with subsidies for buying e-Learning resources, which will help advance market development.

5.27   Taking into consideration various factors and the comments from different sectors, the WG has the following recommendations:

---

1.   The Government should make it clear that one of the aims of the pilot scheme is to encourage collaboration between schools and other sectors in developing and promoting the e-Learning resources market.

2.   The Government may consider providing grants to schools to encourage them to buy e-Learning resources.

3.   The HKEdCity should set up an e-commerce platform for e-Learning resources to assist students and teachers to acquire such resources from various providers, as well as to facilitate the sharing of e-Learning resources designed by teachers.

---

e-Learning and Students' Physical, Psychological and Social Health

Focus of discussion:

1.   **How does the frequent use of computers affect students' health?**

2.   **How can e-Learning be conducted in a healthy way?**

5.28   Apart from promoting e-Learning, the WG and other stakeholders are also concerned about the possible impact of the frequent use of computers on students' physical and psychological health, particularly their eyesight. Some members are also concerned that long hours of computer use may lead to students' negative behaviour. They may become more self-centred, neglect interpersonal relationships or have less face-to-face communication with family and friends.

5.29   Regarding the issue of computer use and eyesight, the WG has sought advice from experts. According to these professionals, no research has yet confirmed that the use of computer will cause or worsen short-sightedness among students or that computers release radiation that adversely affect their health. Nonetheless, students must maintain good reading habits, including a proper posture, to keep their eyes healthy. For example, they should keep a distance of at least 70 cm between their eyes and the computer screen. They should let their eyes rest for 30 seconds or more every thirty minutes. Further, better equipment will help protect their eyes. For instance, their eyes will be less tired when using monitors with high resolution. The brightness of the screen, background and text colour, font size, line and character spacing will all affect their vision. A good reading environment, where light is even and warm and that the computer screen is below eye level, will help protect students' eyesight. (For details, please refer to *Appendix 12*)

5.30   The school sector has always been concerned about the negative behaviour and personality changes in students as a result of computer overuse. The Government, schools, teachers and parents should be on high alert and provide appropriate counselling to affected students as early as possible. When offering e-Learning experiences in schools, teachers should remind students of the principle of "using the right technology at the right time for the right task". They must be reminded that e-Learning is only part of the process of learning and teaching, and that it is just one of the many ways to learn effectively. To help students achieve balanced development in all generic skills for whole-person development, teachers should provide diversified learning activities, encourage students to get to know what is happening around them, and strengthen their interpersonal communication skills. Parents should advise their children on how to use the computer properly at home. To support parents and to provide relevant information and services to the general public, the Government has commissioned voluntary organisations to conduct Internet education activities for the period of one year.

5.31   Taking into consideration various factors and the comments from different sectors, the WG has the following recommendations:

> *1. The Government should provide information on the impact of physical, psychological and social health brought by the use of computers to students and parents.*
>
> *2. While encouraging more extensive use of e-Learning resources, schools and parents should also pay attention to students' physical, psychological and social health.*

Copyright Issues of e-Learning Resources

Focus of discussion:

1. How can we protect intellectual property in the digital environment?

2. How can we strike a balance between sharing e-Learning resources and protecting intellectual property?

5.32 Teachers have expressed their concern over issues regarding the copyright of online resources at various discussions on e-Learning. As the source of a large amount of online resources is unknown, teachers have not been able to obtain permission to use the materials. This restricts them from sharing the resources with others.

5.33 e-Learning resources can be disseminated more readily than printed materials. Publishers are gravely concerned about the illegal use of e-resources and the losses that result. They therefore support the development of a Digital Rights Management (DRM) platform which will help protect the copyright of their products.

5.34 The WG has made reference to the "FAQ on Copyright (Amendment) Ordinance 2007" on the Intellectual Property Department's webpage regarding the new clause on "fair dealing" exemption under Section 41A of the Ordinance. The objective of the clause is to allow teachers and students to use or deal with reasonable portions of copyright works in a fair manner for teaching and learning in a specific course of study. The clause is applicable to both printed materials and materials stored in electronic formats.

5.35 At the WG's discussions on the copyright issues of e-Learning resources, it has been

suggested that promoting the use of resources with an Open Source as well as "Creative Commons" in the academic sector may help settle the copyright issues. Publishers' concerns may also be resolved by a range of technical solutions. The WG believes that teachers do not infringe copyright on purpose. To protect them from the danger of violating intellectual property rights due to a lack of legal knowledge, the Government should step up publicity and strengthen relevant education programmes.

5.36   Taking into consideration various factors and the comments from different sectors, the WG has the following recommendations:

---

1. ***The Government should step up publicity to teachers on how to handle the electronic media, including the copyright of on-line resources.***

2. ***The e-commerce platform for e-Learning resources of the HKEdCity should include an effective digital copyrights management system.***

Textbook Publication

Focus of discussion:

1. **Should the time of textbook compilation given to publishers be extended?**

2. **Should the Government take up the responsibility of textbook publication?**

5.37   Textbook prices are affected mainly by their production cost. To gain a deeper understanding of the production and cost of textbooks, publisher representatives were invited to explain the workflow of textbook production. The workflow can be divided into five stages: planning, compiling and submission, promotion, publication and after-sales follow up.

5.38   The publisher representatives pointed out that they generally had about 22 months to publish a textbook after a curriculum was finalised. Textbook development would take up 12 months. The general textbook publishing timeline is shown below.

General Textbook Publication Timeline

(taking the submission of textbook for review in Oct 2003 as an example)

Curriculum Finalised and Announced

2002.10   2003.10   2004.1   2004.5   2004.8

Around 12 months   3 months   4 months   3 months

Planning and Compiling   Submission for Review   Release of Review Report   Promotion Completed

Publication
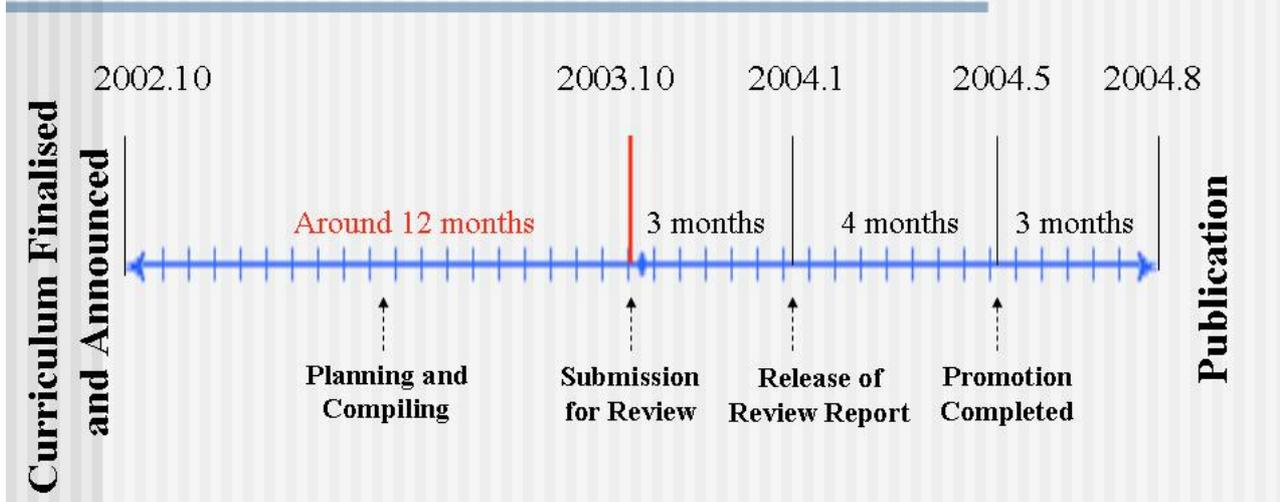
5.39 The publisher representatives in the WG expressed that the existing short production time has increased textbook cost. It is hoped that the EDB can extend the deadline for submission to allow more time to compile textbooks. This will improve textbook quality and reduce staff's overtime work, which will in turn reduce the production cost. Besides, this will also lower the risk of profit loss should the textbooks submitted for review fail to meet the standards.

5.40 Other members of the WG have made the following recommendations regarding the production of textbooks:

(i) Publishers should release data on their average profit margin on textbook production so that the public will have an idea of the cost and pricing of textbooks. This will help clear the public's misunderstanding that the publishing sector is making huge profits;

(ii) The Textbook Committee should allow publishers to submit textbooks in PDF format for review and to print them only after they have been approved. This complies with the principle of being environmentally friendly and will make it easy for authors and editors to amend the content, thus lowering the production cost.

5.41   Responding to the recommendations on providing data on the sector's average profit margin, the textbook publisher representatives noted that the formula for calculating the rate of return may vary among publishers, which accounts for their different status of profit and loss. It is, therefore, difficult to determine the average rate of return across the sector.

5.42   Some members disagree with the argument that the limited time allowed for textbook production has indirectly increased the cost. The school curriculum should follow closely the changes of society. There should not be a big time gap between finalising the curriculum and its implementation. Some members believe that more time for compilation will not lower the cost significantly. The effect is more far-reaching if a suitable curriculum is not implemented promptly. In reality, the compilation of textbooks usually starts before the curriculum is finalised. When the EDB introduces the draft curriculum to schools, textbook editors are also invited to the teachers' seminars, which provide them with an opportunity to gain knowledge and insights into the latest curriculum developments and thus get prepared for textbook compilation. Extending the time for textbook compilation is by no means an appropriate measure. With today's advanced technology, publishers should be able to produce quality and reasonably priced textbooks on schedule. As for the recommendation on submitting PDF files for review, some members point out that under the existing mechanism, this will not contribute much to environmental protection and cost reduction.

5.43   Some believe that the Hong Kong Government should give thoughts to the way textbook publishing is handled in the Mainland. That is, the Government takes up the job of producing affordable textbooks to address the public concern of the continual rise in textbook prices. After carefully considering various sources of information and comments, and after thorough deliberations, the WG believes that the existing mode of textbook publication, i.e. publishers producing textbooks freely based on market demand, works best for Hong Kong. If the Government were to take up the role of textbook publishing, it would place a huge burden on the Government, although the quality of textbooks might be assured and their price reduced. People may think that the Government wants to monopolise the market and to compete with the textbook publishing

sector for profit. This will also limit the space for publishers' survival and lead to a lack of variety in textbook content. This is against the principle of free market economy. As Government produced textbooks will be regarded as the authority learning materials, schools will be deprived of choice. For some subjects like History, the Government may also be criticised for indoctrination.

5.44   Taking into consideration various factors and the comments from different sectors, the WG has the following recommendations:

---

1   The EDB may further strengthen its consultation and communication with the textbook publishers when the curriculum is being developed and when the textbooks are being written and pending submission for review, so that they are fully informed at every stage and can effectively equip themselves for textbook development.

2.   It is undesirable for the Government to fully take up the responsibility of textbook publication. The existing policy of allowing voluntary participation by textbook publishers should be maintained. However, the Government may encourage some educational organisations, non-governmental organisations and non-profit-making organisations to publish reasonably priced paperback textbooks and teaching resources to cater for the need of the public for quality and inexpensive textbooks.

Textbook Review

Focus of discussion:

1.   Should the existing textbook review mechanism be abolished?

2.   If "no", what improvements can be made?

5.45   Textbook is an important tool for student learning. The EDB has the responsibility of providing quality textbooks for schools' selection to ensure the effective implementation of curriculum and help students learn effectively. From the findings of the school questionnaire, most school principals and teachers are satisfied with the quality of the textbooks included in the present *Recommended Textbook List*. Most of the WG members agree that the existing textbook review mechanism is effective in ensuring quality. They have also pointed out that:

(i) Textbooks must be curricula-based and must reach a certain standard. Without the review mechanism, textbook quality cannot be ensured;

(ii) The abolition of textbook review mechanism will give rise to serious questioning from the mass media and the public;

(iii) Textbook review to be taken up by teachers is not feasible as it will increase their workload.

Most of the WG members agree that the EDB should maintain the present textbook review system. However, the comments in the review reports should be disclosed and should consistently seek to improve the quality and standard of textbooks.

5.46   However, some members think that the textbook review mechanism has been abused. Some textbook publishers have used it to find out the mistakes and shortcomings of their draft version, in which proofreading work is obviously lacking or incomplete. They then amend the errors accordingly so that their next submission will stand a better chance of being approved. A small number of members think that the EDB should abolish the textbook review mechanism for the following reasons:

(i) The practice of abolishing the textbook review mechanism and leaving it to the market force could save a lot of resources;

(ii) Some subjects do not accept submission of textbooks for review and this has proved to be not affecting students' learning. This experience can serve as useful reference;

(iii) Publishers can review the textbooks themselves. They can appoint professional organisations to review the textbooks to ensure quality;

(iv) The requirements of the textbook review mechanism have made it difficult for small publishers to compete with the large and financially strong publishers. With the former type of publishers struggling on the edge of survival, the choice of textbooks is further limited and the chance of their price being reduced is slim.

5.47   Taking into consideration various factors and the comments from different sectors, the WG has the following recommendations:

1.   The existing textbook review mechanism should be maintained. However, the EDB may, via the existing Textbook Committee, review the existing textbook review mechanism with the textbook publishers to further improve the system.

2.   The feasibility of allowing other educational organisations to be involved in textbook review should be explored.

Selection of Textbooks in Schools

Focus of discussion:

1.   Are the current practice and role of teachers and parents in the selection and purchase of textbooks subject to discussion?

2.   From the point of view of consumer's right, should parents' participation in the selection of textbooks be enhanced? If "yes", how to do so?

5.48   All along, we have always relied on teachers to select textbooks according to their professional knowledge, students' ability as well as the quality and price of textbooks. Teacher representatives in the WG have pointed out that secondary school and primary school teachers consider different factors when they select textbooks. For secondary schools, teachers select textbooks based on the nature of the subject. Take Mathematics for example. Textbooks which contain a lot of exercises will appeal to teachers. Further, they prefer texts whose content and questions are pitched at a level of difficulty which matches their students' ability. As for History, they prefer textbooks with effective illustrations. Generally speaking, secondary school teachers consider that quality is more important than price and think that most of the free compact discs that accompany the textbooks are useful. In primary schools, textbook selection teams are set up for each subject. They prefer textbooks which follow the curriculum guides. They also consider the price and whether publishers have provided IT teaching materials. It is a common practice that the

textbooks from one publisher are used for one Key Stage.

5.49   The WG members have made the following comments on the current situation regarding textbook selection in schools:

   (i)   Teachers choose the textbooks and parents pay for them. It is unreasonable that the persons who pay have no role in making the choice. Schools should enlist the help of parent representatives or include parents' opinion in the textbook selection process;

   (ii)   Teachers should follow the Consumer Council's suggestion by taking the price of textbooks into account. For textbooks with similar quality, they should choose the cheaper version. The amount of teaching materials provided should not be the major consideration;

   (iii) To facilitate textbook selection, publishers should provide the price as early as possible for teachers' reference;

   (iv)   The topic of whether parents are willing to get involved in textbook selection can be discussed in public forums.

5.50   Taking into consideration various factors and the comments from different sectors, the WG has the following recommendations:

---

1. *Schools should enhance communication with parents concerning the selection and use of textbooks. For example, schools may consider holding consultations at the meetings of the School Management Committee in order to solicit views and suggestions on textbook-related issues from parent representatives.*

2. *The EDB should enhance communication with parent organisations to collect their views and suggestions on textbooks, and reflect their views to textbook publishers.*

Textbook Prices

Focus of discussion:

1.   Should textbooks, as well as teaching and learning materials, be debundled for

pricing?

2.   **After debundling, how can it be ensured that schools will have sufficient resources to buy the various learning and teaching materials?**

5.51   The prices and cost of textbooks are closely related. According to the publishers, the textbooks which they sell to schools are usually accompanied by supplementary teaching materials as part of the package. These include the teacher's edition of textbooks, workbooks, worksheets, cd-roms for learning and teaching, data files for project study, assessment tasks, assessment item banks and supporting websites. The cost of these items is one of the key factors which cause the prices of textbooks to become unreasonably high.

5.52   The WG members recognise that the teaching resources which teachers demand are rather diverse. If publishers continue to provide teachers with such materials free of charge, the cost of textbooks will continue to rise. All parties involved (including the EDB, school principals and textbook publishers) should seek to change teachers' habit of relying too much on publishers for teaching resources and to enhance teachers' flexibility in using textbooks and choosing pedagogical materials.

5.53   To reduce textbook prices, the WG believes that the cost of the support teaching materials provided to schools should not be included in the cost of textbooks which is ultimately borne by parents. Teacher's books and other support resources should be debundled for pricing. Besides, textbooks should not be revised frequently. It is recommended that publishers should, as far as possible, use electronic means to facilitate publicity, particularly their preliminary textbook promotional activities. This environmentally friendly practice will help reduce teachers' workload and the amount of paper used, which in turn will reduce the cost of textbooks.

5.54   In their deliberations, the WG has also taken into consideration overseas experiences regarding the pricing, provision and review mechanism of textbooks (please refer to *Appendix 11* for details).

5.55   From the open seminars and questionnaire, it has been found that the amount of teaching resources provided by publishers is more than necessary. This leads to wastage and increase in textbook prices. At present, parents pay for the textbooks that teachers have chosen for use in class, the prices of which invariably include the cost of the teaching resources publishers offer to schools for free. The WG deemed this unreasonable.

5.56   The resources publishers provide for free can be put into two categories based on user type: the "teaching materials" used by teachers, and the "learning materials" used by students:

Teaching materials	Learning materials
Teacher's handbooks	Workbooks and worksheets
Workbooks (teacher's edition) and worksheets (teacher's edition)	Cd-roms for learning
Cd-roms for teaching	Data files for project study
Answer books	Item banks
Assessment tasks (teacher's edition)	Websites
Item banks	
Wall maps	
Websites	

5.57   The WG's view is that textbooks should be debundled from the support learning and teaching materials for sale. Schools, teachers and parents should only pay for what they need. This will settle the issues regarding the present sale of textbooks which has included the cost of support materials. Publishers should produce support materials as needed to avoid wastage. Not only is this an environmentally friendly way to reduce both the development cost and the textbook price, but the public's expectation can also be met. For materials useful to both teachers and students, such as

item banks, wall maps and relevant websites, publishers may produce them separately as learning materials. Parents will be willing to buy these materials if they find them useful to their children's learning, and this may become another business opportunity for publishers. However, we do not recommend that publishers sell teaching materials that are meant solely for teachers' use to students and parents, e.g. the teacher's edition of textbooks, teacher reference workbooks/worksheets, assessment tasks, as well as answer keys. This is to prevent students from copying, memorising the answers and mechanically following what is prescribed in the teacher's handbook, which will hinder the development of their thinking skills and undermine the effectiveness of learning.

5.58   According to the textbook publisher associations, many school councils have expressed that they will have no resources to buy the debundled teaching materials. The associations have suggested that the EDB should provide a grant, which operates on the principle of an "assigned fund for assigned use", to subsidise schools in purchasing these support materials. However, the WG understands that the Government is unable to provide grants to guarantee the profits of a certain industry and that it should not arbitrarily require schools to purchase the teaching materials debundled from textbooks by using the "assigned fund for assigned use".

5.59   Under the existing mechanism, the Government provides grants to aided schools for flexible use every year. It has been understood that schools have already used these grants to acquire teaching materials published locally and overseas. In addition, the EDB has put in place a mechanism to review whether schools have sufficient resources. After the teaching materials are debundled, the EDB will conduct reviews to see whether schools need extra resources and will, where necessary, provide them to schools so that they can buy quality teaching materials to enhance the quality of learning and teaching.

5.60   All along, textbook publishers have followed the principles of a free market economy and have published and sold textbooks as needed in the market. With the debundling of textbooks and teaching materials, textbook publishers can continue to sell teaching materials under the same principle.

5.61   Taking into consideration various factors and the comments from different sectors, the WG has the following recommendations:

1   Textbooks, teaching materials and learning materials should be debundled for pricing as soon as possible. The cost of the bundled teaching materials and learning materials imposed on textbook pricing is undesirable. It puts unnecessary financial burden on parents.

2   The EDB should continue to develop on-line teaching and learning resources, including the setting up of a curriculum resource bank, to provide teachers and students with diversified teaching and learning materials to cater for their learning and teaching needs.

3   The EDB should step up efforts to encourage teachers to produce and share their self-designed teaching materials so as to move away from textbook-bound teaching and to enhance their professional capacity.

4   The market of on-line resources provided by the publishing sector should be expanded. Textbook publishers should be encouraged to produce quality on-line learning resources for schools and parents' choice.

5   The EDB should issue guidelines to schools, stating clearly that they are not allowed to solicit any free teaching or learning materials from textbook publishers, and should reveal the titles of teaching and learning materials so as to ensure a fair competition in the textbook market.

6   To increase the transparency of textbook prices, continued efforts will be made to upload the prices of all books (including both old and new textbooks) in the Recommended Textbook List onto the website of EDB in April each year, so that teachers can take the prices into consideration when preparing the booklist for the next school year.

7   Book retailers should be encouraged to provide interest-free instalments for parents to alleviate their burden of making one-off payment for the textbooks.

8   The EDB should continue to collaborate with the Consumer Council to step up the monitoring of textbook market activities.

9   The EDB should closely monitor the situation after the debundling of textbooks, as well as teaching and learning materials. If schools have any financial difficulties in the purchase of teaching materials, the EDB should, where appropriate, provide more funding for schools to ensure that they have sufficient resources to buy the teaching materials required.

Textbook Revision

Focus of discussion:

1.   **Why should there be revision of textbooks?**

2.   **How to respond to the public's complaints concerning the lack of regulatory measures by the EDB on the indiscriminate revision of textbooks and increase of prices by textbook publishers?**

3.   **Is the existing "three-year rule of no revision" out-dated?**

5.62   As in other countries, textbooks in Hong Kong need to be revised or amended after being used for certain years for content enrichment or improvement. There are many reasons for textbook revision: (1) The content of textbooks should be updated to suit the changes of society; (2) There are changes in the school curriculum and the ways in which learning and teaching take place; (3) The textbooks should be optimised with more appropriate content and learning activities so as to enhance learning interest and effectiveness. In short, textbooks have changed from "a vehicle of curriculum-based knowledge", i.e. a medium which centres on teaching, to a learning and teaching tool which focuses on learning and the development of knowledge, skills and attitudes. Their content, structure and organisation should therefore be adjusted. Different strategies (e.g. questioning, classroom activities and inquiry) and issues related to daily lives should be adopted to guide students in their learning. In this dynamic society where the volume of knowledge is ever growing, learning should go hand in hand. Space should be created for the optimisation of textbooks. As in other places, Hong Kong has a textbook review mechanism that allows publishers to improve textbooks through revision. Nevertheless, the general public think that publishers use revision as a means to increase prices and to prevent students from using second-hand books, thereby increasing profits.

5.63   In recent years, the EDB has continued to receive complaints from the public about textbooks being revised every year. People in general perceive that the publishers use textbook

revision as a means to increase prices and to prevent students from using second-hand books. This has increased the financial burden of parents.

5.64   The EDB has implemented the "three-year rule of no revision" for a long time. According to the findings of the school questionnaire, most school principals and teachers think that a three-year period of no revision is reasonable. However, the WG believes that the rule can be further enhanced. As shown in the questionnaire findings, most teachers consider that the textbooks for their subject do not really require any revision. However, should there be any supplementary information or minor content changes, they thought it would be more practical to include them in an appendix to complement the textbook. Another possible way is to release the revised content online for teachers and students to download for free. Besides, the curriculum frameworks of various subjects, which had been revised in the light of the curriculum reform, have now been confirmed and therefore no drastic changes are anticipated in the short run. The WG suggests that the **three-year rule of no revision** should be changed to **revision as needed**. For example, a revision will be justified when there are drastic changes in the curriculum or in the approaches to learning and teaching. Not only can this proposal help optimise the textbook revision mechanism and allow publishers to improve textbook quality flexibly, but it will also change the public's impression that publishers can "revise the textbooks once three years have passed".

5.65   The textbook publisher associations think that the present "three-year rule of no revision" is a consensus reached with the EDB after many years of discussion, and that this mechanism has been found effective. The findings of the school questionnaire showed that about 70% of the school principals and teachers agreed that the rule is appropriate. Nonetheless, the EDB has always sought to improve the review system. For example, in September 2008, the EDB and the textbook publisher associations reached the agreement that for certain subjects, publishers can submit the textbooks of the whole Key Stage, or those of a particular year level, or merely one volume for review to cater for different needs. Nonetheless, the textbook publisher associations think that the definition of "revision as needed" is unclear. If it is adopted, revision will not be possible without

curriculum change, despite ongoing advancements in society. If textbooks are not revised for years, their content will be outdated, and this will affect the learning of students. It is recommended that the existing "three-year rule of no revision" should be maintained although clearer guiding principles should be identified for approving revision applications, or the "four-year rule of no revision" previously suggested by the textbook publisher associations should be adopted.

5.66   After the implementation of the New Academic Structure, student learning consists of four Key Stages with each Key Stage lasting three years, i.e. P1 to P3 as Key Stage 1, P4 to P6 as Key Stage 2, S1 to S3 as Key Stage 3, and S4 to S6 as Key Stage 4. Teachers need three years to complete the teaching of a Key Stage before they can review the structure, content, design and coherence of a textbook set. Publishers must wait for teachers to complete the teaching for the Key Stage before they can collect their views for analysis and evaluation to see whether any revision is needed. If revision is needed, publishers will need to study and plan before they can compile the new edition for submission. All these take time. Besides, it takes at least 24 months for publishers to complete any revision work before they apply for revision. Thus, the WG reckons that publishers should apply for revision no less than five years after publication, which is more reasonable than the present requirement of three years.

5.67   Taking into consideration various factors and the comments from different sectors, the WG has the following recommendations:

---

1. *The "three-year rule of no revision" should be changed to "five-year rule of no revision", and the EDB should strictly review whether the applications for textbook revision are truly justified.*

2. *The EDB should communicate with textbook publishers via the Textbook Committee and clearly define the meaning of "need" in respect of textbook revision which will serve as the basis for vetting future applications.*

3. *After the revision has been approved, the textbook publisher has to explain to teachers the reasons for revision so that the teachers can compare the new version with the old one before making a choice.*

> **4.** *Whenever there are minor changes or updates in the curriculum in the future, the EDB should provide supplementary teaching and learning materials of the modified parts for schools' reference and use.*

Textbook Recycling Programme

Focus of discussion:

1. **The provision of recycled books to students by schools can alleviate parents' financial burden. However, is it practically feasible?**

2. **Are there any alternatives to promote textbook recycling?**

5.68   As a means to alleviate parents' financial burden, the public has proposed that schools should provide recycled books to students. Similar measures were also suggested in the Consumer Council's *Study of Market Practice in the Textbook Industry*[10] released on 12 September 2001. It recommended that schools assume the responsibility of purchasing textbooks and loaning them to students. It also suggested that textbook assistance, which is currently provided for students in need, should be channelled to schools so that they can buy enough copies of textbooks for student use. The Consumer Council believes that this plan can ensure a better deployment of public funds, improve the present situation where users (parents) do not seem to have any part to play in the textbook selection process, and allow the market to function more efficiently.

5.69   In response to the recommendations of the Consumer Council, the EDB discussed with schools in 2002 how to pilot the scheme in schools. After consulting the views of the education sector (including schools and the CDC Committee on Learning Resources and Support Services), it was felt that there would be difficulties in implementing the scheme. A small-scale exploratory study was, therefore, proposed to assess its effectiveness. Two secondary schools and two primary schools would decide whether to join the pilot scheme based on the views they collected from teachers and parents. After a thorough discussion with their school management committees,

---

[10]   Website: http://www.consumer.org.hk/website/wrap_chi2/textbook/20010912/chinese/sum_c.htm

teachers and parents, they concluded that the scheme was not feasible and decided not to participate in the pilot scheme. The reasons why the four schools considered the scheme impractical were:

(i) Students needed to jot notes or write answers in their textbooks from time to time. They would not be able to do so if they needed to keep the textbooks clean. This would bring inconvenience to students, exert psychological pressure on them and dampen their interest in learning. Besides, it would not be environmentally friendly if schools had to provide students with extra notebooks or activity worksheets to jot notes on.

(ii) The scheme required schools to purchase, store and maintain textbooks as well as to keep the accounting records. All this would bring extra workload to schools and teachers.

(iii) Parents believed this scheme would not save them much money as it was more economical for them to buy second-hand textbooks. Compared with the present School Textbook Assistance Scheme which subsidises them in buying textbooks, parents preferred keeping the current practice.

5.70   Although the textbook recycling programme is shelved, the Consumer Council, the public, District Councillors and LegCo members have made similar suggestions from time to time, with the aim of alleviating parents' financial burden while recognising the need to be environmentally friendly.

5.71   Hong Kong students have long been used to writing directly in their textbooks for the purposes of note-taking and homework. If the recycling programme were to be implemented, they would need to change this practice. The programme has an impact on the use of textbooks by students, as it might affect their learning effectiveness. If the Government were to provide textbook assistance to every student in Hong Kong, then price will no longer be a determining factor in the selection of textbooks. As a result, teachers will be more inclined to rely on textbooks when teaching and this will offset all the efforts made to encourage teachers to design their own teaching

materials. If the Government is the only buyer of textbooks, publishers may raise the prices of textbooks due to the worry that the demand for textbooks will drop drastically. Besides, the programme will cause schools and teachers extra administrative workload.

5.72   The WG members agree that the sale and purchase of used textbooks should be promoted. However, textbook recycling should not be encouraged. It is suggested that schools should be subsidised for the environmental measures they adopt. An example of these measures is an environment incentive scheme introduced to promote the use of second-hand books. Moreover, students should be encouraged to buy and share reference books and storybooks with each other in school. This will reduce their expenses on books.

5.73   Taking into consideration the comments from different sources and various other factors, the WG has made the following recommendations:

1.   *The EDB may promote the co-operation between environmental protection agencies and schools, and launch various kinds of textbook recycling programmes, such as the donation and sale of second-hand textbooks, as well as the buying of reference books and story books and loaning them to students according to their school context (e.g. teaching needs and parents' wishes).*

2.   *The EDB should draw on international experiences and explore the feasibility of textbook recycling programmes that suit the local learning culture of students. The EDB should then devise further direction on textbook recycling.*

3.   *The EDB should intensify their promotional efforts by urging schools to organise used book sales or donation campaigns, and encouraging students to participate in textbook recycling.*

Chapter 6

Action Plan

(A)　Objectives

- To recommend **direction and strategies on the development of e-Learning** building on existing strengths and facilitating diversified development.

- To encourage schools to make **flexible use of e-Learning** in order to promote self-directed learning and interactive learning as well as to cater for learners' diversity, with a view to **enhancing learning effectiveness**.

- **To optimise and rationalise the existing textbook system**.

(B)　Development of Textbooks and e-Learning Resources to Improve the Existing Mechanism and Enhance Learning and Teaching

1. **A three-year pilot scheme on "Promoting e-Learning" will be launched in 20 - 30 local schools in the 2010/11 school year.**

   Aims:
   - To develop, try out and evaluate different modes of teaching and learning, in order to identify the effective ways of implementing e-Learning in different subjects.
   - To explore a sustainable and commercially viable business model for the e-Learning resources market, in order to cater for the needs of schools, teachers and students.

2. **From the 2009/10 school year onwards, additional resources will be provided to strengthen and expedite the development of the existing Depository of Curriculum-based Learning and Teaching Resources (including Primary Chinese Language, English Language, Mathematics and General Studies). In the meantime, measures will also be taken to expedite the development of the Depository for the junior secondary levels so as**

to expand the coverage of the Depository in terms of Key Stages and Key Learning Areas.

Aims:

- To develop the Depository of Curriculum-based Learning and Teaching Resources which serves to provide practical advice on the use of IT in teaching and learning and recommendations on the selection of appropriate digital resources so as to relieve teachers' workload in implementing e-Learning.

- To help teachers and students acquire diversified and quality e-Learning resources from the Internet to facilitate e-Learning.

3. **In the 2009/10 school year, a one-off grant will be provided to all local schools for purchasing e-Learning resources for students (the grant to be used by schools in the next three years).**

   Aims:

   - To further promote the use of fee-charging e-Learning resources in schools.

   - To encourage the publishing sector and other sectors to expedite the development of e-Learning resources and enhance the quality of the resources.

4. **To set up an e-commerce platform for e-Learning resources and an online community for teachers at the HKEdCity website.**

   Aims:

   - To provide an infrastructure platform to promote the development of the market for e-Learning resources.

   - To help students and teachers acquire quality e-Learning resources from the Internet.

   - To encourage the publishing sector, the IT sector and the education sector to jointly develop e-Learning resources.

   - To enhance the evaluation of e-Learning resources via on-line communities.

5. **From the 2010/11 school year onwards, textbooks and teaching and learning resources will be debundled for pricing so as to allow the market to operate on a user-pays basis. Teachers and parents may choose to buy only the resources that fit their needs. The EDB will issue guidelines stating clearly that schools are not allowed to solicit any free teaching or learning materials from textbook publishers. The EDB will closely monitor the situation after the debundling of textbooks, as well as teaching and learning materials. If schools have any financial difficulties in purchasing teaching materials, the EDB will, where appropriate, provide more funding for schools to ensure that they have the materials required for teaching.**

    Aims:

    ● To rationalise the current situation of bundled sale and purchase of textbooks and teaching materials.

    ● By adopting the user-pays principle, textbook publishers will be encouraged to produce the appropriate amount of teaching materials as required by schools. This will help reduce cost and avoid waste, thereby lowering the price of textbooks. As such, the stakeholders' interest will be safeguarded and the public's expectation can be met.

    ● To allow schools to buy the appropriate teaching materials that fit their specific needs.

6. **From the 2010/11 school year onwards, the "three-year rule of no revision" will be changed to "five-year rule of no revision".**

    Aims:

    ● To rationalise the arrangements for application for textbook revision – Since the implementation of the Curriculum Reform in 2000, the curriculum framework for each Key Stage has now been basically established and is subject to less change. There is an obvious decline in the need for textbook revision in the light of the Curriculum Reform.

Under the new academic structure, each Key Stage lasts for three years. Hence, it takes teachers three years' time to complete using a set of textbooks before they can make any concrete suggestions on issues such as the compilation and contents of textbooks as well as the coherence and articulation of the learning activities and themes. For publishers, it is not until the relevant Key Stage has been completed that they can carry out specific analysis and reviews on the textbooks to see if there is any need for revision. All these take time. Taking into account that textbooks submitted for revision are required to make quality amendments and that the principle of cost control should be adhered to, we estimate that the publishers need at least 24 months to complete the reviews and development. It is therefore more reasonable to allow publishers to apply for revision after a five-year period, as compared with the existing three-year rule.

- The above measure can reduce the frequency of textbook revision, thus addressing the complaints of the public. In the long run, it can also help to stabilise textbook prices.

(C) Other Support Measures

7. To effectively steer the e-Learning pilot scheme, the Government may consider setting up a steering committee as well as encourage and support the establishment of a cross-sector working group. Apart from supervising the implementation of the pilot scheme, the duties of the steering committee will also include evaluating the outcomes and effectiveness of the pilot scheme and making recommendations to the Government regarding long-term strategies on using e-Learning resources. The cross-sector consortium will endeavour to promote collaboration and partnership among schools, the publishing sector and the information technology sector with a view to enhancing the effectiveness of the pilot scheme.

8. In-depth studies on the copyright of e-Learning resources and the possible impact on students' health due to the frequent use of such resources will be carried out in order to formulate relevant strategies and support measures.

9. During the consultation period of any major curriculum change, communication with textbook publishers will be strengthened to help them get hold of the development of the curriculum at an early stage and get well prepared for textbook compilation.

10. The existing textbook review mechanism will be further improved and the feasibility of allowing other educational organisations to be involved in textbook reviews will be explored.

11. Communication with parent organisations will be enhanced. Parents' views and suggestions on textbook quality and prices will be collected and reflected to textbook publishers for improvement.

12. The transparency of textbook prices will be increased. Continued efforts will be made to upload the prices of all books (including both old and new textbooks) in the Recommended Textbook List onto the website of EDB in April each year, so that teachers can take the prices into consideration when preparing the booklist for the next school year. Seminars and workshops for teachers will be held to sharpen their professional judgement in selecting textbooks.

13. The EDB will provide supplementary teaching and learning materials for schools whenever there are minor changes or updates in the curriculum in the future.

14. Educational organisations, universities or other non-profit-making organisations are encouraged to participate in the development of textbooks, and teaching and learning materials so as to provide teachers with a wider range of choices.

15. Schools may launch various kinds of textbook recycling programmes, such as the donation or sale of second-hand textbooks and the purchase of story books for loan to students according to school-based contexts (such as teaching needs, parents' wishes, etc.) so as to encourage students to re-use textbooks.

Chapter 7

Conclusion

The Way Forward

7.1   In the context of e-Learning, there will be a change in the role of teachers from being a knowledge transmitter to a learning facilitator. In this respect, they have to formulate appropriate teaching strategies to guide students to learn in a proper direction and in an organised manner. Teachers have to learn how to assist students in selecting and assessing the information from multiple perspectives and using them to solve problems. In formulating teaching strategies, teachers have to identify the targets of learning and provide students with IT learning resources, so that they can make use of appropriate IT to learn properly at suitable times. They should ensure that student learning remains the main concern and avoid using IT simply for the sake of using IT. Besides, teachers can also make use of the flexibility of e-Learning to formulate various teaching strategies according to students' needs and abilities in order to achieve personalised learning.

7.2   To enhance the effectiveness of learning and teaching, to develop students' ability of learning to learn and to foster their whole-person development are the focuses and objectives of the future development of Hong Kong education, and textbooks and electronic learning resources are one of the key factors of success. In the face of rapid social and IT development, the development of e-Learning resources is increasingly inevitable. However, printed textbooks are still playing an important role in lessons. With the continuous improvement of conventional textbooks complemented by the development of updated e-Learning resources, we have created a much better learning environment for students so that they can keep abreast of the latest knowledge and information, develop their ability of learning to learn and pursue life-long learning.

7.3   In order to achieve the above objectives, the EDB should:

       (i)   use the various development modes tried out in the pilot scheme to encourage and

promote the education sector and the publishing sector to participate in the development of e-Learning resources, with a view to providing more diversified learning materials and modes for teachers and students;

(ii)   actively develop e-Learning resource banks to reduce the workload of teachers in applying IT to learning and teaching;

(iii)   formulate concrete measures to ensure that all students can participate in e-Learning regardless of their socio-economic status, physical or intellectual status;

(iv)   strengthen communication with textbook publishers and make efforts to improve the existing textbook review and revision mechanism; and

(v)   provide a fair playing field for the publishing sector to compete, so that reasonably priced textbooks and e-Learning resources can be produced by textbook publishers and other organisations.

Acknowledgement

The Working Group on Textbooks and e-Learning Resources Development deeply thanks all members for their active participation in the discussions and related tasks, putting forward invaluable views and recommendations. Besides, through working collaboratively with different professional organisations, as well as sharing and collecting views from the public, the Working Group has gained a deeper understanding of the related issues on the development of textbooks and e-Learning resources. The Working Group takes this opportunity to express its heartfelt thanks and gratitude to all parties involved.

Appendices

Membership List of Working Group on
Textbooks and e-Learning Resources Development

To seek views and recommendations from various sectors, the Working Group comprises of stakeholders from different sectors. Its membership list is as follows:

Chairman :	Mr. CHEN Wei-on, Kenneth	Under Secretary for Education
Secretary :	Mr. LEE Sha-lun, Sheridan*	Former Principal Education Officer (Curriculum Development)
	Mr. TAM Koon-che*	Principal Education Officer (Curriculum Development)
Members :	Mr. MA Siu-leung	Chief Executive Officer of Fung Kai Public School
	Dr. YUEN Kin-sun	Open University of Hong Kong; Former Member of CDCC on Learning Resources and Support Services
	Prof. LEE Chi-kin, John	Dean of Education, The Chinese University of Hong Kong
	Prof. CHEUNG Wai-lok, David	Head of Department of Computer Science, The University of Hong Kong
	Ms Ann SO	Vice-chairperson, Federation of Parent-Teacher Associations of Kwun Tong District
	Dr. TSE Pak-hoi, Isaac	Principal, PLK Yao Ling Sun College
	Mr. SHUM Yiu-kwong	Principal, FDBWA Chow Chin Yau School

Ms CHAN Shuk-ying	Teacher, Christian Alliance Toi Shan H.C. Chan Primary School
Ms SH'E Ngan-suen, Nancy	English Panel-chair, Sing Yin Secondary School
Mr. SIN Chung-kai	Former Member of the Legislative Council (Functional Constituency of Information Technology Sector)
Mrs. LEUNG LAU Yau-fun, Sophie	Member of the Legislative Council (Functional Constituency of Textiles & Garment Sector)
Ms Sansan CHING	Founding Chairman of the Hong Kong Council of Early Childhood Education and Services
Ms LAU Yin-hing, Connie	Chief Executive of the Consumer Council
Mr. LI Hing-sang, Simon	Chairman, the Anglo-Chinese Textbook Publishers Organisation
Mr. WONG Wai-man (in attendance)	President, the Hong Kong Education Publishers Association

* Mr. TAM Koon-che is the Secretary of the Working Group from April 2009

Using Depository of Curriculum-based Learning and Teaching Resources to Design e-Learning Process for Students

The Depository of Curriculum-based Learning and Teaching Resources is created along the curriculum framework. It selects and reorganises existing online and printed resources, with teaching suggestions and user-tips added and arranged under different themes. Teachers may refer to the curriculum guides and select suitable units based on their teaching focus. With the teaching suggestions and tips, teachers can design an effective e-Learning process as needed by their students.

The subjects of Chinese Language, English Language, Mathematics and General Studies at primary school level are used as illustrations for reference.

Chinese Language

For Chinese Language at primary school level, we have used the reading module from KS2 to illustrate how to design an e-Learning process for the unit on 「古詩欣賞」("ancient-style poetry appreciation").

e-Learning Process:

When designing this unit, teachers may refer to and download the 「古詩文」(ancient-style poetry and literature) unit[11] under KS2 in the Depository as the blueprint of designing e-Learning process.

When designing this e-Learning process, teachers must first define learning objectives. This module focuses on "ancient-style poetry appreciation". It is hoped that students will read and understand the feelings and thoughts of poetry through different e-Learning resources and that they will even move

---

[11] http://www.hkedcity.net/edb/teachingresources/resources.php?site_key=chi&categoryId=905&rid=1498853498#1498853498

further and learn to appreciate the beautiful language and the vivid imagery.

- Teachers may refer to 《積累與感興：小學古詩文誦讀材料選篇 (試用)》("experience and expression: selected readings of ancient-style poetry and literature for primary schools (trial)")[12] and select suitable poetry as teaching materials. The information there may be used as reference to design the course.

- Teachers may choose four Tang poems including 《遊子吟》("traveller's song") as teaching materials.

- Teachers may upload an ETV programme 「詩情繫古今」(唐詩欣賞) ("poems of all times" (Tang poem appreciation)[13]) to the e-Learning platform or the Intranet. Students will need to view it before class so that they will have some initial understanding.

- Teachers may play the animation on ancient-style poetry in 「詩歌天地」("world of poems")[14] and lead students to discuss the content of "traveller's song". Teachers may refer to the questions in 《積累與感興：小學古詩文誦讀材料選篇 (試用)》("experience and expression: selected readings of ancient-style poetry and literature for primary schools (trial)").

- Teachers may play the audio recording in 「詩歌天地」("world of poems") and 「古詩誦賞」("reading ancient-style poetry")[15] before asking students to read them.

- Teachers may use the e-Learning resources above to explain the content and terms in the poems.

- Teachers may ask students to download the assignment from 「樂在詞中--古詩」("joy in words——ancient-style poetry")[16]. They can work in groups and share their findings with teachers and fellow students.

- Teachers may upload the e-Learning resources of Tang poems (「詩歌天地」[17]、「樂在詞中—

---

[12] http://www.edb.gov.hk/FileManager/TC/Content_3019/01_shi.pdf
[13] http://resources.hkedcity.net/resource_detail.php?rid=1738539911
[14] http://www.chinalane.org/life014/bookstore/poem/00000503.html
[15] http://www.rthk.org.hk/chiculture/chipoem/
[16] http://www.dragonwise.hku.hk/dragonwise/p3index.htm
[17] http://www.chinalane.org/listing/poem.html

古詩」[6]、「古詩誦賞」[5]) (「詩歌天地」("world of poems") [7], 「樂在詞中—古詩」("joy in words——ancient-style poetry"), 「古詩誦賞」("reading ancient-style poetry")) to the e-Learning platform or the Intranet. Instruct students to browse through what is suitable to them so that they will learn more about Tang poems. This can be assigned as an extension activity and can cater for different learning needs.

- Students may express their ideas and comments on Tang poems in the Intranet chat room. Teachers may give feedback and guidance.

English Language

The Unit "Dress Casual Day" under the Module "Fun and Games" is used to illustrate how to organise a task for KS 1 students using the resources in the Depository. The main task of this unit is to learn different clothing items and write about the dressing on Dress Casual Day using Blog.

e-Learning Process:

- In preparing the resources, teachers can download from the Depository the unit 'Dress Causal Day' under KS 1 for designing the learning activities[18].

- Teachers can show the PowerPoint 'Clothes'[19] to students to motivate them and learn the vocabulary about clothing items.

- While learning the vocabulary, teachers can show the animation about phonics[20], such as the initial sound 'sh' in shirt, shoes, and let students learn the ways of pronunciations.

- Teachers can read the story 'My Favourite Clothes'[21] with students. After reading, students discuss their favourite clothes and what they want to wear on Dress Causal Day. Students can practise the target language forms to express interests, feelings and opinions in speaking and writing using the worksheet[22].

---

[18] http://www.hkedcity.net/edb/teachingresources/resources.php?site_key=eng&categoryId=942
[19] http://www.hkedcity.net/edb/teachingresources/downloadResource.php?rid=654746832
[20] http://www.starfall.com/n/level-k/letter-j/play.htm?f
[21] http://www.britishcouncil.org/kids-stories-clothes.htm
[22] http://www.britishcouncil.org/kids-print-clothes.pdf

- Teachers can put the links on the school e-Learning platform and ask students to play games[23] about the vocabulary to check what they have learnt. Teachers can also put more challenging quizzes[24] for more able students and audio vocabulary list[25] for less able students on the platform to cater for learning diversity.

- After Dress Causal Day, students can write on the Blog to talk about others' clothes. Teachers can write a Blog using EdBlog of HKEdCity[26] and create accounts for students before the lessons. An exemplar of EdBlog is attached[27].

Mathematics

The unit of "3S1 Parallel and Perpendicular" in the module of "Shape and Space" of KS1 Mathematics is used for illustration. The e-Learning process is designed for "perpendicular lines".

e-Learning Process:

For reference, teachers may download the pack "3S1 Parallel and Perpendicular" of the first term in Primary 3 from the learning area of "Shape and Space" from the Depository.

When designing an e-Learning process, teachers must first define the learning objectives. The goal for this module is to "recognise perpendicular lines" and "make perpendicular lines in a variety of ways". Teachers may use different e-Learning resources to allow students to learn in different ways. They could learn through self-discovery, discussion and experiment the definition of perpendicular lines and making them with e-tools.

- Teachers may refer to the activity of "parallel lines and perpendicular lines"[28] and ask students to observe different pairs of lines in groups to find out the features. They need to look for similarities and report the findings to the class.

---

[23] http://www.vocabulary.co.il/games2/matchgame/match.php
[24] http://iteslj.org/v/ei/clothes2.html
[25] http://www.eflnet.com/vocab/dictionary/clothing1.php
[26] http://edblog.hkedcity.net/editor/teahcerblog/
[27] http://edblog.hkedcity.net/fk1ps3b-english
[28] http://cd1.edb.hkedcity.net/cd/maths/tc/ref_res/Addenda_series/pic/pic6.pdf

- Teachers may summarise students' findings and use "Perpendicular"[29] to introduce the definition of perpendicular lines.

- Teachers may use "Perpendicular Lines"[30] as an enrichment activity and explain the definition of perpendicular lines to those more able students.

- Teachers may ask students to find out perpendicular lines in class and discuss the definition of perpendicular lines.

- Teachers may ask students to make perpendicular lines with books, rulers or set squares which have a right angle.

- Teachers may ask students to make perpendicular lines by folding paper.

- Teachers may ask students to form groups and make perpendicular lines with the interactive "Geometry Board"[31]. They may make their own right-angle to check whether the lines are perpendicular to each other.

- Teachers may ask students to use electronic media (e.g. digital photos and videotapes) to record things with perpendicular lines and bring them back to class.

General Studies

The module of "electricity" from the strand "Science and Technology in Everyday Life" in KS2 of General Studies is used to illustrate the design of an e-Learning process.

e-Learning Process:

Teachers may refer to and download from the Depository the theme "electricity" from the strand "Science and Technology in Everyday Life" in KS2[32] as the blueprint for the design of the e-Learning process.

When designing an e-Learning process, teachers must first define the learning objectives. The

---

[29] http://www.mathopenref.com/perpendicular.html
[30] http://illuminations.nctm.org/activitydetail.aspx?id=50
[31] http://www.mathplayground.com/geoboard.html
[32] http://www.hkedcity.net/edb/teachingresources/resources.php?site_key=gs&categoryId=625

theme "electricity" aims at helping students to understand what closed circuit is through various e-Learning resources. They may also learn to use different materials to build a closed circuit so that they will learn the differences between conductors and insulators. Teachers may foster an attitude of inquiry among students through investigative activities. Students may learn to solve problems in daily lives with simple science.

- Teachers may ask questions on the blog before class. Questions may be about "the impact of electricity on our daily lives". Students may write their answers on the blog as they prepare for class.

- Teachers may summarise the answers from the blog and ask students to make a conclusion. Teachers may play the video of "Energy Efficiency Education Kit – electricity and daily lives"[33] to show students how electricity can influence our daily lives and motivate students to learn.

- Teachers may show the "closed circuit video"[34] to show how to build a closed circuit. Teachers may send students the link of "the world of electricity"[35] through the e-Learning platform so that they can explore through the Internet.

- Teachers may ask students to submit worksheets through the e-Learning platform and discuss the "experiment results" with other students on the blog. Teachers will give a conclusion.

- Teachers may send students the link of "Energy Efficiency Education Kit – electricity and daily lives"[36] through the e-Learning platform and ask them to learn it at home and finish the exercise for their self-learning according to their ability.

---

[33] http://energy-efficiency.qed.hkedcity.net/Kit1/Kit1M1/K1M1_video/index_K1M1_video.htm
[34] http://resources.hkedcity.net/resource_detail.php?rid=1021910978
[35] http://www.hkedcity.net/edb/teachingresources/project/?p=electricity&path=/main
[36] http://energy-efficiency.qed.hkedcity.net/Kit1/Index_Kit1.htm

Overseas Experience – Development of e-Learning and e-Learning Resources

This paper summarises the experience of eight overseas economies, namely Australia and New Zealand, Ontario of Canada, United Kingdom, Singapore, South Korea, Taiwan, and the states of California and Texas in U.S.A., in implementing e-Learning and developing e-Learning resources. By integrating e-Learning into the learning and teaching process, the respective regions have produced various e-Learning resources, and developed e-textbooks as well. This summary focuses on the practice adopted by different regions in developing and promoting the use of these resources, programme features, outcome, cost and prospect.

Australia and New Zealand – Learning Federation Initiative (2001-2009)

Learning Federation is an organisation operated jointly by two ministerial authorities, namely Curriculum Corporation and education.au Limited. Learning Federation and the Ministries of Education of Australia and New Zealand have jointly developed online course contents to facilitate schools' learning and teaching. The contents are distributed by electronic means, so that teachers and students can obtain quality assured resources efficiently.

These e-Learning resources contents, developed by content providers (including private and commercial providers), education and training sectors (including schools, vocational education and training sector and higher education sector), teachers and cultural and community organisations (e.g. museum) at home and overseas[37], were used free by secondary and primary schools, that is, 10,385 schools, and a total of 3.4 million students and 245,777 teachers (as at 2008). The estimated development cost for the period 2001-2006 is AUD73,000,000 (equivalent to HK$484 million); the total cost for 2006-2009 is estimated at AUD55,000,000 (equivalent to HK$365 million)[38].

---

[37] The Learning Federation. (2008b)
[38] The Learning Federation. (2008a)

Studies on teachers and students using Learning Federation resources[39] have shown an increase of teachers using Learning Federation resources over time, but the overall usage is still low. They use the resources more frequently from grade 3 to grade 7 (i.e. upper primary to junior secondary) classes. Both teachers and students have expressed that they use resources of Learning Federation in mathematics, literacy and science more frequently, but use less frequently in those subjects of innovation, corporation and creativity, and foreign languages.

According to a survey conducted by the Sydney University[40], compared with students learning the same content in traditional classroom setting, students using Learning Federation resources scored higher marks in Mathematics tests, particularly when the content involved difficult concepts; and students have become more motivated and involved in learning, and they find Learning Federation resources "easy to complete" and "interesting". They find the resources most helpful in that they can learn according to their progress.

As the value of Learning Federation resources is being generally accepted, and that all subject areas and classes may need additional resources, the Australian government therefore will continue to develop online course content, and has earmarked AUD32.60 million (equivalent to HK$216 million) for the development of online course resources, tools and technological framework for a period of two years, with a view to stepping up formulation of necessary policies and implementation measures, so as to overcome obstacles encountered in using e-Learning resources in classroom[41].

Ontario, Canada – e-Learning Pilot Scheme (2006 – 2010)

The Ontario Ministry of Education spent CAD3.5million (equivalent to about HK$ 25.5 million) on the development of an e-Learning platform[42]. Through the provision of a wide range of e-Learning

---

[39] Freebody (2006); Freebody & Muspratt (2007); & Freebody et al. (2007 & 2008)

[40] Freebody, P. et al. (2007 & 2008)

[41] Department of Education, Employment and Workplace Relations (2009); & The Learning Federation (2006a).

[42] E-Learning Ontario (http://www.elearningontario.ca/eng/aboutus/Default.aspx) is an essential online resource for the government funded elementary and secondary school teachers and students. Through e-Learning Ontario, the Ministry

resources, help is given to elementary and secondary school teachers to teach online, and to enhance students' learning interest. At the same time, it provides an opportunity for teachers to communicate and share teaching resources and experience.

Through the e-Learning platform, all province government-funded schools are connected to the online education resources bank, learning management system, e-community, and seat reservation system for e-Learning courses. This provides adequate learning opportunities for the large number of students who need to complete the credit-awarding secondary school curriculum in order to obtain the diploma or the credits for promotion, so that they can continue with their studies or get a job. The e-Learning platform now has over 3,000 items for students and teachers from kindergarten to grade 12.

As a part of the Rural Student Success Program, the e-Learning pilot scheme aims to achieve 85% rate of graduation in 2008, and let 75% of students aged 12 attain or exceed the provincial standard on reading, writing and science ability test in 2010.

Despite the lack of support by research data, most teachers find the e-Learning mode meeting the students' present learning needs. Not only does it raise their learning interest, but also let students study and learn according to their own needs and progress. The setting up of an e-Learning platform enables teachers to search and share teaching resources, and a platform to share experience. As for students, they enjoy the fun of e-Learning very much. The interactivity and user-friendliness of e-Learning resources enable them to obtain learning resources easily at home, and command and learn knowledge in an innovative way.

U.K. – TeacherNet

TeacherNet is an online teaching resources bank set up by the Department for Children, Schools and Families to support the integration of IT into learning and teaching. The resources bank contains

---

lots of teaching resources developed by teachers, museums, charities, Department for Children, Schools and Families and other government departments, and provides a variety of teaching information on teaching and learning.

The purpose of the resources bank is to, through the provision of easily accessible and reliable free teaching resources, guidelines and professional development information, help pre-service and serving teachers, teaching assistants, supporting staff, school principals make the best use of information and communication technology, enhance teaching effectiveness, and take the opportunity to demonstrate the importance of information and communication technology in teaching.

At present, over 2000 items in the resources bank have been examined by teachers, covering lesson plans and resources in the first to the third learning phases of the national curriculum. Teachers can use the teaching resources to develop lesson plans with information and communication technology, and apply the new teaching rationale and methods in certain topics.

The Department for Children, Schools and Families is working on all learning websites, including TeacherNet. The process involves improving the search engine and adjusting website content. At the same time, the login system is being revised, with a view to enabling users to have single sign-on with different websites, so that teachers can obtain reliable teaching resources through more effective and integrated means.

Singapore – Masterplans for Information and Communication Technology in Education (1997-2002), (2003-2008), (2009-2014)

The Education Technology Division under the Ministry of Education of Singapore is responsible for the development of information and communication technology learning resources, integrating into learning and teaching through the Masterplans for information and communication technology in education. The plans focus on the ability of teachers and schools to share the best practices. Different degrees of autonomy and ownership are allowed based on the information and

communication technology of individual schools. Information and communication technology learning resources related to the development and curriculum objectives, once received, are distributed through the Internet.

Resources compiled and developed by the Masterplans include e-Learning resources already available (e.g. CD-ROM learning package on sale at home and overseas), e-Learning resources for subscription (e.g. learning management system and e-Learning portal website), contents developed by teachers, and resources provided by the Education Technology Division. The Ministry of Education aims to integrate information and communication technology into 30% of the curriculum at all grades, and into all subjects as far as practicable by 2002[43]. As at mid-2007, a total of 351 schools, 534,737 students and 27,505 teachers from primary and secondary schools participated in the programme.

The Ministry of Education has estimated that expenditure of the Masterplans for information and communication technology in education for 2008-2010 will be SGD9.60 million (equivalent to HK$52.90 million)[44]. If the e-Learning resources used by schools are provided by business bodies, students may have to pay. Each student may use these resources at home and in school. In 2008, the annual subscription fee ranges from SGD10 to 50 (equivalent to HK$55 to 276), depending on the agreement made between schools and vendor, and the content of subscription as well. Singapore students may make payments from Edusave Pupils Fund[45]. Some schools may subsidise part of the fee.

An opinion survey conducted by the Ministry of Education revealed that[46] over seventy percent of the responding students agreed that the use of different forms of technology has helped to enhance their knowledge. Over eighty percent of the responding students thought the use of technology made lessons more interesting. According to comments made by teachers, the use of CD-ROM or

---

[43] Koh & Lee (2008)，P.173。
[44] Singapore Budget (2008).
[45] Ministry of Education (2009a); & Powell & Patrick (2006)
[46] Ministry of Education (2004).

interactive multimedia resources, such as animation, simulation, videos and images have strengthened students' understanding of concepts and theories, and imagery. What is more, it has strengthened students' creativity, critical thinking, problem solving skills and independent learning ability.

The Singaporean government also launched "Future Schools" Scheme, a 4-year private-public collaboration scheme that costs 80 million Singapore dollars (equivalent to HK$ 441million)[47]. Five schools will take the initiative to adopt a wide range of highly innovative learning environment, to enable student learning at any time anywhere, and to reduce the reliance on printed textbooks. By 2015, there may be as many as 15 "future schools" (about 5% of all schools in Singapore). The planned new forms of learning content and services mainly include[48]:

- interactive textbooks ─ under a "one-to-one" computer usage environment;

- digital game ─ to enhance experience learning;

- life broadcast, Avatar and 3-D learning content ─ used to promote interactions between students and teachers in real time and in a virtual learning environment;

- Learning Digital Exchange ─ it will provide a supplementary digital learning resources network on top of interactive textbooks, covering resources developed by teachers, schools and vendors, and public resources obtained from libraries, the Ministry of Education and other higher education institutions.

South Korea – E-textbook Development Programme (2008)

The South Korean Ministry of Education launched an e-textbook development programme in 2008. The programme aims to set up a ubiquitous learning (u-learning) environment, so that students can learn freely at any time anywhere. Besides, it also aims to provide opportunities for the disabled and those living in remote areas, to lower the expenditure on education, and eliminate the learning divide.

---

[47] Info- communications Development Authority (2006).
[48] Info- communications Development Authority (2006 & 2008)

The Government has expected to put in 66 billion Won (about HK$ 412.50 million) in the programme to complete the development of 25 types of e-textbook. It is planned that pilot e-textbooks on six subjects, including Korean, Mathematics, English, Social Studies, Science and Music will be developed for the fifth grade students, and e-textbooks on Korean and Mathematics will also be developed for t grade 3 to grade 6 students suffering from amblyopia or colour-blindness.

E-textbooks are designed to put learning as the focus. It integrates the existing textbooks, including texts, reference materials, exercises and dictionaries, and by using different forms of interactive activities, teaching is conducted in a multimedia learning environment (such as videos and virtual world) to meet students' learning needs. These e-textbooks have been used on a trial basis in four primary schools since 2006, and the trial is planned to extend to 100 primary schools across the country by 2011. A study on the distribution system, quality management, teacher training, policy and regulation, teaching environment, and the effectiveness and impacts of e-textbooks will be conducted in 2012. From 2013 onwards, e-textbooks will be distributed free to every primary school in Korea. The Education Ministry will also provide electronic white boards and wireless network systems for selected schools.

Taiwan – Ministry of Education Website on Teaching Resources

The Ministry of Education website on teaching resources is one of the initiatives under the digital learning exchange programme launched by the Taiwanese Ministry of Education. The purpose of setting up the website is to promote the development and application of teaching, so as to enhance teaching quality, and to assure the quality of the contents in the resources bank. The Ministry of Education Taiwan expects to integrate the contents and technical support of digital learning through application of information and network technology, to construct digital learning exchanges and sharing mechanism and to encourage teachers to jointly work out and use e-teaching resources so that their teaching skills are enhanced.

Contents of the resources website are provided by the government and textbook publishers, covering all learning areas and major topics. The Ministry of Education has even opened up restriction on using government-developed digital resources, and has teamed up with textbook publishers to open up intellectual property rights, to increase the diversity of digital teaching resources. At present, the digital learning resources bank has altogether 46,876 items of resources, for primary and middle school teachers and students. It is expected that by 2011, an additional 24,000 items will be reused or shared, with target usage set at 25,000 times.

California, U.S.A. – California Free Digital Textbook Initiative (2009)

The Californian government, in conjunction with the U.S. Department of Education, Office of the Secretary for Education and State Board of Education, has launched the California Free Digital Textbook Initiative, the purpose of which was to encourage collaboration among school areas, so as to ensure that every student has the opportunity to receive first-class education, and reduce education expenses under the continued financial crisis.

California Learning Resources Network[49] reviews digital textbooks submitted by content providers (e.g. publishers) to determine if they are suitable for schools, teachers and students, and are aligned to the stringent national standards. At present, there are ten free digital textbooks on mathematics and science uploaded for students to download and print. The authorities will soon announce a list of free high school digital textbooks which covers mathematics and science curriculum, and aligned to standards.

The second phase of the initiative has commenced, which includes the production of interactive digital textbooks for all grades. The ultimate objective is to set up a website containing all digital textbooks on a national basis.

---

[49] CLRN was established in December 1999, and was commissioned by the California State Department of Education to provide one-stop service for Humboldt, Kings, Orange, Sacramento, Santa Clara, Stanislaus and San Diego in helping schools select supplemental electronic learning resources aligned to the State Board of Education academic content standards.

Texas, U.S.A. – Technology Immersion Pilot (2004)

The Constitution requires the state governments to provide free textbooks for students. The state strives to explore means to provide students with textbooks by using advanced technology, with a view to cutting cost. Technology immersion pilot is a project originating from a state legislation, with funding from grants. By 2011, the project will be implemented in 29 school campuses in 23 school districts. By integrating digital content into core subjects systematically, the project has encouraged more use of technology in classroom and less use of textbooks. On-going scientific research will be launched to evaluate the impact of the scheme.

Schools competed for funding to test the impact of different degrees of "technology immersion" on students learning. The total funds allocated for 2004-2006 was about US$16.50 million (equivalent to HK$128.50 million); during 2006-2008, a sum of US$11.40million (equivalent to HK$88.80 million) has been allocated for the continuation of the project; the Federal grant used to evaluate the scheme's effectiveness amounts to US$1.90 million (equivalent to HK$14.80 million). Participating schools are given learning packages developed by vendors, with price ranging from US$1,100 to 1,600 (equivalent to HK$8,566 to 12,459). Items included are wireless portable computer equipment, online teaching resources containing e-textbook and appropriate software and e-Learning tools. Vendors have provided schools with professional training and continued technical support.

Effectiveness evaluation on the scheme is being conducted every year. Data is collected from various channels, including questionnaires, field trips, students' examination results and other records. The study has found that technology immersion has positive effects on reading and mathematics. The effects become more pronounced when teachers and students become more skilful in applying the technology. As far as usage is concerned, the degree of "availability and usage"[50] of portable computer among students remains low. Generally speaking, students seldom

---

[50] "Availability and usage" is defined as the extent (no. of days) to which students use portable computers during the school year, the frequency of using technology in core subject lessons, and the extent to which they use portable

use their portable computer for learning outside schools, but research has found that those students who use portable computers more frequently outside schools score higher marks in reading and mathematics tests. During the third year of the scheme, teachers increased the use of technology for student activities during lessons, and they had a more positive attitude to the use of technology in teaching.

It is understood that a bill to extend "technology immersion pilot" scheme to upper middle schools, and to authorise state authorities to provide funding from government general revenue for the pilot scheme has not secured the support of the Senate Education Committee. The reasons are: huge funding will be involved; the effects of the scheme on academic performance need to emerge; and the rapid development of technology may render the scheme obsolete. From now till 2011, the scheme is still a pilot scheme that maintains the same number of participants.

References

1   Department of Education, Employment and Workplace Relations. (2009) *Digital Education Revolution: Online Curriculum Resources and Digital Architecture*. Available from: http://www.deewr.gov.au/Schooling/DigitalEducationRevolution/Pages/Onlinecurriculumresou rcesanddigitalarchitecture.aspx [Accessed April 2009].

2   Education Week (May 11, 2009). *California Going Digital with Math, Science Textbooks*. Available from: http://blogs.edweek.org/edweek/curriculum/2009/05/california_goes_digital_with_t.html

3   e-Learning Ontario. Ministry of Education of Ontario, Canada. http://www.elearningontario.ca/eng/aboutus/Default.aspx

4   Freebody, P. et al. (2006). *Early-Stage Use of The Learning Federation's Learning Objects in*

computer in doing assignments and learning.

Schools: Results of a Field Review. New South Wales, The University of Sydney.

5   Freebody, P. et al. (2007). *Evaluating The Learning Federation's Online Curriculum Content Initiative Summary of Findings from Surveys, Site Visits and a Field Experiment*. New South Wales, The University of Sydney.

6   Freebody, P. et al. (2008). *Alignment of Perceptions about the Uses of ICT in Australian and New Zealand Schools: Survey Report*. Freebody, P. et al. (2007)

7   Freebody, P. & Muspratt, S. (2007). *Uses and Effects of The Learning Federation's Learning Objects: An Experimental and Observational Study*. Available from: http://www.thelearningfederation.edu.au/verve/_resources/tlf_report_final.pdf [Accessed April 2009].

8   Info-communications Development Authority. (2006). *Empowering Learners and Engaging Minds, Through Infocomm: Report by the iN2015 Education and Learning Sub-committee*. Available from: http://www.ida.gov.sg/doc/About%20us/About_Us_Level2/20071005103551/03_Education_and_Learning.pdf [Accessed April 2009].

9   Info-communications Development Authority. (2008) *Rethinking Pedagogies by Creating Possibilities through Digital and Interactive Media*. Available from: http://www.ida.gov.sg/News%20and%20Events/20071122191423.aspx?getPagetype=21 [Accessed April 2009].

10   Koh, T.S. & Lee, S.C. (2008) Digital Skills and Education: Singapore's ICT Master Planning for the School Sector. In: Lee, S.K. (eds.)

Toward a Better Future: Education and Training for Economic Development in Singapore since 1965. Washington, The World Bank.

11   Ministry of Education. (2004) *Masterplan for IT in Education*. Available from:

http://www3.moe.edu.sg/edumall/mpite/overview/index.html. [Accessed April 2009].

12   Ministry of Education, Ontario (2005) *McGuinty Government Boosts Success for Rural High School Students*. Available from:

http://www.elearningontario.ca/eng/pdf/rural_schools_nr_english.pdf

13   Ministry of Education. (2009a) *Edusave Scheme: Funds, Grants and Awards.* Available from: http://www.moe.gov.sg/initiatives/edusave/funds-grants-awards/#pupils-fund [Accessed April 2009].

14   News Today. Korea.net. (2007). *Digital textbook to debut in 2008.* Available from: http://www.korea.net/news/news/newsview.asp?serial_no=20070308026

15   Print CEO. (June 10, 2009). *California's Digital Textbooks Initiative*. Available from: http://printceo.com/2009/06/digital-textbooks-initiative

16   *Singapore Budget.* (2008) Available from: http://www.mof.gov.sg/budget_2008/revenue_expenditure/attachment/MOE_EE2008.pdf [Accessed April 2009].

17   TeacherNet. Department for Children, Schools and Families, Government of the United Kingdom. Available from: http://www.teachernet.gov.uk/

18   The Learning Federation. (2006a) Evaluation 2001-2005 of The Learning Federation against it original terms of reference. [Accessed April 2009].

19   The Learning Federation. (2008a) The Learning Federation: Phrase Three Plan 2006-2008. Available from:

http://www.thelearningfederation.edu.au/verve/_resources/phrase_three_plan_.pdf [Accessed April 2009].

20   The Learning Federation. (2008b) The Learning Federation- Sustaining Supply of Content for Digital Education Revolution. Available from:

http://www.thelearningfederation.edu.au/verve/_resources/Sustaining_supply_of_content.pdf [Accessed April 2009].

21   台灣教育部 (2008 年 8 月)。《教育部中小學資訊教育白皮書 2008-2011》。Published at: http://www.edu.tw/files/site_content/B0010/97-100year.pdf

Textbook Development in Hong Kong

Textbook Publishers

- Develop textbooks, teaching and learning resources according to the curriculum recommended by the Curriculum Development Council

- Under appropriate conditions, textbook publisher submit new textbooks to the Education Bureau for review. The approved textbooks will be included in the *Recommended Textbook List.*

- Introduce to schools textbooks and supporting resource materials

- Launch them in the market for parents to buy

Curriculum Development Council

- Involve different stakeholders (e.g. teachers, parents, employers, scholars in tertiary institution, people in the community)

- Formulate and revise curriculum according to circumstances and needs

Schools

- Implement the curriculum recommended by the Curriculum Development Council

- Select or develop different learning and teaching resources (including textbooks) to support quality learning and teaching.

- Communicate effectively with parents / students (e.g. on textbook lists)

- Organise used book sale or purchase books in bulk according to school-based needs

Other Organisations Developing Learning and Teaching Resources

- Including tertiary institutions, electronic learning and teaching resources developers, Hong Kong Education City, non-governmental organisations, Education Bureau and schools

- Produce appropriate materials for teacher's use according to demand

Parents

- Purchase textbooks and learning materials on the textbook list

- Purchase used books as needed

Implementation of Various Subject Curricula

under the Curriculum Reform Framework

Year of implementation	Kindergarten and primary school curriculum	Secondary school curriculum
2001	Putonghua (primary 4)	Mathematics (secondary 1) Business Fundamentals (secondary 2), Design and Technology (secondary 2), Science (secondary 2) English Language (secondary 3), Religious Education (secondary 3), Basic Computer Studies (secondary 3), Art and Design (secondary 3), Chinese History (secondary 3), Geography (secondary 3)
2002	Mathematics (primary 1) Putonghua (primary 5)	Chinese Language (secondary 1) Mathematics (secondary 2) Business Fundamentals (secondary 3), Design and Technology (secondary 3), Science (secondary 3) Additional Mathematics (secondary 4)
2003	Physical Education (primary 1) Mathematics (primary 2)	Physical Education (secondary 1) Chinese Language (secondary 2)

		Mathematics (secondary 3)
	Putonghua (primary 6)	Geography (secondary 4), Economics (secondary 4), Physics (secondary 4), Biology (secondary 4), Chemistry (secondary 4), Information and Computer Technology (secondary 4), Integrated Humanity (secondary 4), Science and Technology (secondary 4)
		Additional Mathematics (secondary 5)
2004	General Studies (primary 1 to 6) Physical Education (primary 2) Mathematics (primary 3)	Physical Education (secondary 2) Chinese Language (secondary 3), English Language (secondary 4), Mathematics (secondary 4), History (secondary 4), Chinese History (secondary 4) Geography (secondary 5), Economics (secondary 5), Physics (secondary 5), Biology (secondary 5), Chemistry (secondary 5), Information and Computer Technology (secondary 5), Integrated Humanity (secondary 5), Science and Technology (secondary 5)
2005	English Language (primary 1) Physical Education (primary 3)	Chinese Language (secondary 4), English Literature (secondary 4) English Language (secondary 5),

	Mathematics (primary 4)	Mathematics (secondary 5), History (secondary 5), Chinese History (secondary 5)
2006	Chinese Language (primary 1), Music (primary 1), Visual Arts (primary 1) Physical Education (primary 4) Mathematics (primary 5)	Chinese Language (secondary 5) Music (secondary 1), Visual Arts (secondary 1) Mathematics (secondary 4), History (secondary 4), Chinese History (secondary 4) English Language (secondary 5)
2007	Pre-school education Chinese Language (primary 2), Music (primary 2), Visual Arts (primary 2) English Language (primary 3) Physical Education (primary 5) Mathematics (primary 6)	Music (secondary 2), Visual Arts (secondary 2) Mathematics (secondary 5), History (secondary 5), Chinese History (secondary 5)
2008	Chinese Language (primary 3), Music (primary 3), Visual Arts (primary 3) English Language (primary 4) Physical Education (primary 6)	Music (secondary 3), Visual Arts (secondary 3)

2009	Chinese Language (primary 4), Music (primary 4), Visual Arts (primary 4) English Language (primary 5)	Senior secondary subjects

Summary of Views from Student Forums

1.   To collect students' views on the development of textbooks and e-Learning resources, the Working Group and the Hong Kong Federation of Youth Groups jointly organised two student forums, which were held at the Sha Tin Town Hall and the Hong Kong Federation of Youth Groups Building on 21 February 2009 and 28 February 2009 respectively. The themes of the first forum were "Evaluating the current situation of young people using e-Learning resources" and "Young people's vision on e-Learning resources". The second forum was a follow-up to the discussion of the first forum, and the themes were "Application of e-Learning resources in different learning stages", "Refining e-Learning resources taking students' health into consideration" and "Sustainable development of e-Learning resources".

2.   About 120 students and 200 members of the "Hong Kong 200" attended the first forum. About 50 students and 200 members of the "Hong Kong 200" attended the second forum. In each of these two forums, six members of the "Hong Kong 200" delivered speech on the chosen themes.

3.   Being the most direct users of the existing learning resources, students shared their learning experiences and difficulties in using textbooks and e-Learning resources, and made recommendations. Their views and recommendations are summarised as follows:

> ➢   e-Learning resources were more effective to arts students, because they found it rather difficult to borrow from the library certain books which however were readily available on the Internet. Moreover, e-Learning resources allowed students to study anytime and anywhere, making learning more interesting, thus increasing students' opportunities in class participation. However, some students showed concern that e-Learning resources only aroused students' interest in the learning mode, rather than the subjects. Besides, the accuracy of online information could not be guaranteed.

These teaching materials needed to be monitoring properly.

➢ Some speakers suspected that wrong allocation of resources was the cause for the failure of effective implementation of e-Learning in spite of the $7.1 billion government investment. However, some pointed out that the mature development of computer software showed some results of the government's investment. Lack of promotion and inappropriate use by teachers were believed to be the reasons why e-Learning resources were not popular. The effectiveness of e-Learning resources would depend on how teachers use the materials. Most teachers only kept displaying the powerpoints, failing to take advantage of the interactions and communication as facilitated by the use of e-Learning resources. Some students suggested that the implementation of e-Learning should begin with encouraging students to participate, instead of the learning mode adopted by teachers. Students should not just follow the learning contents taught by teachers, but lead their own learning.

➢ Students pointed out that the government should actively promote and establish a culture of using e-Learning resources. At present, parents often wrongly perceived students using computer as "playing on the computer". But some students stated from their experience that though it was convenient to use e-Learning resource, if students did not make good habit of using computer, using e-Learning resources might become an excuse to use computer just for fun.

➢ Students stated from their experience that they used electronic whiteboard during lessons, but had technical problems such as pen-touch problems. Furthermore, if many people used e-Learning resources at the same time, the server would fail to work. Therefore, e-Learning resources called for sufficient technical support.

➢ Students were also worried that the current teacher training had placed too much emphasis on IT, but had overlooked solid knowledge base of the subject. The

government should strengthen its support in this area.

➤ Students opined that the features of e-Learning (such as auto-correct, grammar check) should be further studied and developed so as to prevent students from cheating, particularly in examinations.

➤ Using the computer persistently for a long period of time would lead to health problems. If the use of computer started from primary schools, the impact would be even more far-reaching. Therefore, users should have good protection of their eyes when using e-Learning resources.

➤ Speakers showed concern about issues related to intellectual property as a result of the use of e-Learning resources and the use of pirated software. Therefore, copyright issues must be addressed when developing e-Learning resources. One of the issues to be studied would be the illegal downloading of online textbooks.

➤ Regarding environmental issues, some students agreed that e-Learning resources would reduce the use of paper, but others disagreed in that most teachers and students would print out materials for classroom use or for revision. Besides, computer hardware used for e-Learning resources would require constant updating, resulting in electronic wastes. Relevant authorities should consider how to solve these problems. However, conventional textbooks could be recycled for many times, and hence more environmental friendly. Also, students worried that software producers would shorten the usage period of e-Learning resources for users so as to increase profits.   This in turn would increase the burden of users.

➤ Students suggested that teachers and schools should process and make good use of e-Learning resources according to their specific needs so as to promote better teaching. Schools could decide whether they would use e-Learning resources, and the government should not make the implementation of e-Learning mandatory.

Summary of Views from Open Seminars

1.   To collect public views on the development of textbooks and e-Learning resources, the Working Group organised three open seminars, which were held at Sha Tin Town Hall, Henry G. Leong Yau Ma Tei Community Center and the North Point Kai-Fong Welfare Association Chan Shu Kui Community Hall on 7 February 2009, 27 February 2009 and 7 March 2009 respectively. Professor WONG Po-choi, chairperson of the Committee on Home-School Co-operation, was invited to be the host of the seminars.

2.   There were about 100 attendants in both the first and second open seminars, and about 80 attendants in the third open seminar. Over 60% of the attendants in the three open seminars were parents, while the remaining consisted of students, teachers, school principals, publishers and people from the IT sector. Each seminar was divided into two sessions, the first session discussing the quality, development and price of printed textbooks, while the second session discussing the development model of e-Learning resources.

3.   In the first session, majority of the attendants considered that the existing textbooks were too heavy in weight and expensive in price. There were rooms for improvement in the quality and publishing mode of textbooks. Views of attendants are summarised as follows:

> ➢   Regarding the quality of textbooks, in order to protect students' eye vision and for easy writing, it would be more appropriate to use normal and non-reflective papers for printing.

> ➢   Regarding the weight of textbooks, student exercises should be excluded from the textbooks. Not only would it facilitate recycling, it would also reduce the weight and production cost. The attendants also suggested that textbooks should be designed by adopting a detachable mode. Not only would it allow students to carry textbooks by

chapters to schools, it would also reduce the weight of their schoolbags.

- ➢ Regarding the mode of publishing, the attendants suggested to further study various ways to facilitate the re-use of textbooks, including schools providing textbooks and exercise books to students so as to reduce parents' financial burden.

- ➢ Regarding the textbook prices, the utility rate of supplementary materials, such as compact discs, was in generally low. These materials did not help much to enhance the effectiveness of teaching and learning, but causing increase parents' expenses on textbook.

- ➢ Regarding the sales tactics, publishers should avoid offering luxurious gifts to schools (such as delicate packaging), while the discount rebate for textbooks given to schools should go to parents.

4. In the second session, most attendants agreed that the use of e-Learning resources would be a global trend. However, they also pointed out that IT should not be over emphasised. Traditional textbooks and e-Learning resources should complement each other, in order to enhance the effectiveness of teaching and learning. Their views are summarised as follows:

- ➢ "e-Teaching" and "e-Learning" would be totally different. While e-Teaching was teacher-oriented, e-Learning was student-oriented. The emphasis should be placed on the latter one.

- ➢ The implementation of e-Learning would be of great importance in the present era. It would be essential to train students' self-learning ability, as this would be a difficult task by adopting the "spoon-feeding" mode of education as used the past. Students' need to acquire IT skills is of equal importance as that in Chinese, English and Mathematics subjects. These skills should be acquired by children as fundamental skills, of which students could survive in society in the future.

- Teachers should update their pedagogies. They should make good use of e-Learning resources to enhance interactions, stimulate students' learning motivation, and train students' self-learning ability. e-Learning should be implemented progressively focusing on effectiveness. Emphasis should be placed on research and progress, and should be dealt with according to the salient characteristics of individual subjects. It should also be conducted by phases and through the inception of pilot programme.

- e-Learning resources could be updated anytime. It could facilitate students to acquire the latest information, as well as being more environmental friendly. Conversely, it might also lead to disposal problem and hardware wastage.

- Some attendants showed concern about students' attitudes towards using electronic resources. Students should be prohibited from mis-using and abusing the resources. Besides, the copyright issues should also be a matter of concern.

- Some attendants expressed that e-Learning resources apparently seemed to be cheaper than textbooks. Yet, the act of students browsing the Internet did not necessarily imply learning. The existing value of textbooks rest with its nature of being progressive, evaluative and a professional product based on curriculum needs. According to the survey conducted by the Hong Kong Federation of Youth Groups, 60% of the students concurred with the practice of adopting textbooks as the principal means and be supplemented by e-Learning resources should be the model for future. Yet, laptops could not entirely replace textbooks.

- Some attendants worried that frequent use of computer would affect students' physical and mental development, impeding their interactions and communication with others, while reading on the screen for long period of time would be detrimental to their eyes.

- Attendants generally expected that learning contents should be more varied and

diverse, while teachers and students should have more freedom of choice and independence in selection, in order to accommodate changes in the new era as well as to tie in with the changes brought about by regional and individual differences. It could be achieved by enhancing the coherence between printed textbooks and e-Learning resources.

Summary of Written Feedback from Open Seminars

5.   Due to the limited time of the seminar, it was not possible to listen to views of all attendants. Therefore, collection boxes were placed in the venue to collect public views on existing textbooks and e-Learning resources. There were a total of 65 feedback forms collected from the three seminars.

6.   The written feedback regarding views on existing textbooks collected in the three seminars was substantially in line with the summarised views of the Open Seminars described in Paragraph 3, mainly in hope of simplifying textbooks design, reducing the weight and thickness of textbooks as well as textbook prices. The views and feedback collected are summarised as follows:

> ➢   The main text and exercise sections should be separated as multiple booklets for each set of textbook so as to reduce their weight and thickness. It would be more convenient to carry, recycle and re-use. Besides, textbooks should use non-reflective papers to reduce production costs and facilitate students to write on the textbooks.

> ➢   Efforts should be made to simplify the design and contents of textbooks, complementing with e-Learning resources so as to enhance students' learning interest, and providing guidelines to help students further explore knowledge, and facilitate their self-reflection and self-learning. Online platform to update textbook information should be adopted. This could reduce weight of textbooks and production cost, facilitate revision made to textbooks, and hence reduce the textbook prices.

> ➢   It was pointed out that there were too many supplementary materials attached to

textbooks, which could not be used under the tight classroom schedules. It was also a waste for teachers teaching only one or two chapters of the textbooks. It was suggested that the government should monitor schools to prepare school-based curricula that best suited their students. Government should also monitor those unnecessary or irrelevant supplementary materials attached to textbooks. It was also suggested that government should set a price cap on textbooks so as to reduce parents' financial burden.

> It was suggested that schools should provide textbooks on loan to students annually. Not only would it be an environmental friendly practice, but also help to reduce students' expenses on textbooks.

> Individual attendants thought that there were not enough members in the Textbook Reviewing Panel of the EDB. Therefore, opinions were not comprehensive and representative enough. Also, members' background and representation were lacking transparency.

7.   The written feedback regarding views on e-Learning resources and applying e-Learning resources for teaching and learning collected in the three seminars were in line with those collected at the Open Seminars, the major view being that rather than relying entirely on the implementation of e-Learning resources, traditional textbooks should complement e-Learning resources so as to enhance the effectiveness of learning and teaching. The issues regarding the costs of e-Learning resources, impacts on students' health and teacher training had been the keen concern from the public. The views are summarised as follows:

> The attendants worried that low-income families would not have the ability to cope with the costs for electronic devices, such as computer, software, etc. Moreover, electronic resources would require regular updating which would substantially increase parents' financial burden. It was suggested that schools should provide the

resources to schools.

- ➢ It was considered that the development of the existing e-Learning resources was not mature enough. More researches would be required. Prior to the implementation of e-Learning, it would be necessary to conduct in-depth analysis and take into account schools' culture, teachers' abilities, parents' abilities, technical and maintenance problems of e-Learning resources, etc. Students should be taught in accordance with their abilities and aptitude. More training should be provided for teachers, or even parents. Moreover, efforts should be made to reduce the unexpected technical problems in class so as to avoid delaying the teaching progress.

- ➢ Individual attendants worried that the use of e-Learning resources might involve copyright infringement issues. Furthermore, it was suggested to introduce the development of e-Learning resources by other business sectors or organisations as well, so as to avoid publishers from monopolizing the market.

- ➢ A common e-Learning platform should be set up for schools to create their school-based e-Learning resources, as well as facilitating cross-referencing and optimising educational resources among schools.

- ➢ It was considered that educational experts, teachers, parents and the public should collaborate so as to create and compile the content of a student encyclopaedia, somewhat similar to that of the Wikipedia.

- ➢ e-Learning resources could enhance students' learning interest, increase the interactions between teaching and learning, help students to learn and acquire knowledge, cater for students' different capabilities, and assist them in developing their abilities. However, it was suggested that careful monitoring on the approval of the content and quality of e-Learning resources, such as compact discs, would be needed. e-Learning resources should be used in conjunction with textbooks.

➢ Using e-Learning resources continuously for a long period of time would have adverse impacts on students' eyes, spine, etc. Furthermore, how to manage students' browsing of appropriate information on the Internet should also be an issue for concern.

School Questionnaire

by the Working Group on Textbooks and e-Learning Resources Development

This questionnaire seeks to understand the use of textbooks and e-teaching resources by school principals / assistant school principals, panel-chairs and teachers, and to collect their views on the future development of textbooks and e-Learning resources.

1. A total of 3,101 questionnaires were received. From those provided with job title, about 2.8% respondents were school principals/assistant school principals, 51.0% panel-chairs and 35.4% teachers. Of the panel-chair and teacher respondents, about 56.7% were from primary schools, 42.4% from secondary schools, and less than 1% from special schools.

(A) Selection of Textbooks in Schools

2. Factors affecting principals and teachers in selecting textbooks (in the order of importance):

    (96%) Quality of content

    (79%) Provision of support resources (e.g. teaching material, worksheets, exercises, compact discs, etc.)

    (76%) Effectiveness of application in teaching and learning

    (20%) Textbook prices

    (17%) Support from publishers

    (8%) Design in editing and printing

2a. With reference to <u>quality of content</u>, factors affecting principals and teachers in selecting textbooks (in the order of importance):

    (79%) Clear and appropriate content and structure

    (75%) Content coverage highly in line with curriculum guides

    (50%) Suitable for students in the school

(43%)   Provide learning activities to stimulate students' interest and learning motivation

(38%)   Accurate information and data/concepts

(8%)   Accurate language

(3%)   Accurate and appropriate illustrations with explanations

2b. With reference to <u>provision of teaching and learning support resources</u>, factors affecting principals and teachers in selecting textbooks (in the order of importance):

(86%)   Providing support materials which help and ease teachers' teaching

(65%)   Providing learning resources which facilitate student's self-learning

(43%)   Providing assessment materials and related software

2c. With reference to <u>effectiveness of application in teaching and learning,</u> factors affecting principals and teachers in selecting textbooks (in the order of importance):

(80%)   Can stimulate students to think

(62%)   Help teachers in lecturing

(46%)   Comprehensive content

(43%)   Easy-to-understand content

(40%)   Help students' self-learning

(23%)   Easy to remember for students

2d. With reference to <u>textbook prices</u>, factors affecting principals and teachers in selecting textbooks (in the order of importance):

(93%)   Prices of textbooks

(54%)   Prices of workbooks

(29%)   Whether the school needs to pay extra money for the acquisition of the supporting resource materials

(21%)   Prices of the supporting resource materials (e.g. compact discs, resource packs)

2e.   With reference to <u>support from publishers</u>, factors affecting principals and teachers in selecting textbooks (in the order of importance):

    (39%)   Talks on use of teaching materials

    (39%)   Seminars for teachers

    (11%)   On-site support (e.g. talks for students, exhibition booths, posters, etc)

    (45)   Designated personnel to answer questions on use of teaching materials

2f.   With reference to <u>design in editing and printing</u>, factors affecting principals and teachers in selecting textbooks (in the order of importance):

    (98%)   Clarity of content

    (58%)   Amount of pictures and photos

    (54%)   Font type and size

    (45%)   Division into different volumes

    (24%)   Layout design

    (17%)   Weight

3.   If the textbooks do not provide teaching and learning support resources, about 5% of school principals and teachers would use them; about 19% would not, and the remaining 76% replied that it depends on the actual situation.

4.   When publishers publish textbooks, they will also publish a series of supplementary workbooks to help student learn. Students need to buy the textbooks and workbooks separately. (a) About 59% of school principals and teachers thought that these supplementary workbooks were necessary; 41% did not think so. (b) Among those who said necessary, about 78% thought that the supplementary workbooks would help; about 14% thought that supplementary workbooks would help teaching, but they may not be necessary; only about 6% thought that the supplementary workbooks were very necessary.

5.   In the selection of textbooks, about 56% of school principals and teachers would review 4 sets of textbooks or above before they made a decision; about 39% would review 3 sets; less than 3% would review only 1 set or 2 sets.

6.   6% of school principals and teachers who were responsible for the subject thought that the *Recommended Textbook List* provided a very sufficient number of choices; about 79% said it was sufficient; about 11% thought it was not sufficient; and about 2% commented that it was very insufficient.

7.   About 46% of the textbook selection team in schools used 3 to 4 weeks to select textbooks; about 29% used more than 1 month; and 23% used 1 to 2 weeks.

8.   About 91% of replies stated that in the process of textbook selection, panel-chairs and other teacher representatives were involved. The most common way to get involved was through subject meetings where all subject teachers had discussion and made comments. While some schools circulated textbooks and grading sheets for all subject teachers to assess them.

9.   About 94% of replies stated that no parent representatives were involved in the process of textbook selection in the school. For schools that involved parent representatives, most of the opinions about quality of content and textbook prices were gathered through parent-teacher associations.

10.   About 76% of school principals and teachers did not agree to involve parent representatives in the textbook selection process. The main consideration was that parents might not have the relevant professional and analytical power. They might not be able to consider the factors other than price and might not know the school curriculum adequately.

11.   About 72% of school principals and teachers agreed to disclose to the public textbook lists and the amount of money students spent on textbooks mainly because they thought this would raise the level of transparency of textbook selection. In fact, schools are accustomed to post their textbook lists on the school webpage annually for the public's reference.

(B) Textbook Review

12.   About 67% of school principals and teachers were very satisfied or satisfied about the quality of the textbooks listed in the *Recommended Textbook List*; 25% were satisfied about some textbooks; about 6% stated that they did not know the quality of the textbooks in the *Recommended Textbook List*.

13.   About 41% of school principals and teachers thought that it was necessary to delegate the task of textbook review to other bodies; about 32% said it was not necessary; about 23% had no opinion; less than 3% of school principals and teachers thought that publishers should be responsible for quality assurance and submission for review was not needed. Among those who replied necessary, about 39% thought that an independent ad hoc committee should be set up for the task; about 27% thought that tertiary institutions should take up the task; and about 21% thought that other education organisations/bodies should be responsible.

14.   About 73% of school principals and teachers thought that the present duration of "three-year rule of no revision" was appropriate; about 6% thought it was too long; and 8% thought it was too short.

15.   About 44% of school principals and teachers thought that it might not be necessary to revise the textbooks of the subjects they taught; about 16% thought it was not necessary, mainly because the curricula of the subjects they taught were not revised and the teachers had the ability to make adjustment and supplement materials according to the school-based curricula. On the contrary, about 25% of school principals and teachers thought that revision was very necessary or necessary, mainly because the curricula were being reformed and they needed to work in line with the implementation of NSS curriculum.

16.   If the latest textbook version had to be revised, school principals and teachers thought that they should be revised in the following ways (in the order of the level of feasibility):

(75%)　Make revisions on separate pages and attach them to the original textbooks

(45%)　Release revisions on the web for teachers' use

(44%)　Release revisions on the web, and provide free download for students

(27%)　Publish a new version of textbook

(C)　The Provision Mode of Textbooks

17.　School principals and teachers think <u>the best ways</u> to provide textbooks are listed below: (in the order of preference):

(48%)　Schools select textbooks and students buy them on their own.

(35%)　Schools select and order textbooks in bulk and parents pay.

(4%)　Schools buy textbooks and lend them to students and students return them to schools by the end of the school term.

(2%)　Schools compile teaching materials at their own cost.

(2%)　Schools select e-textbooks and students buy electronic support resources and pay fees for the use of copyrighted materials.

(2%)　Schools pay for e-textbooks, electronic hardware, software and copyright fee and lend them to students. Students return them to schools by the end of the school term.

(3%)　Schools select and order in bulk e-textbooks, electronic support resources and copyright fee, and parents pay.

18.　There was a big difference between the preference of primary and secondary schools on how textbooks are provided. 35% of primary schools teachers thought that the best way was that schools selected the textbooks and students bought them on their own; 48% thought that the schools should be responsible to select and buy textbooks in bulk and parents would pay. On the contrary, 65% of secondary schools teachers thought that the best way was that the schools selected textbooks and students bought them on their own; 18% thought that schools should be responsible to select and buy textbooks in bulk and parents would pay.

19.   About 40% (27% for primary schools; 55% for secondary schools) of schools had organized used books donation or sales activities; about 51% (66% for primary schools; 31% for secondary schools) replied that they did not have such activities in school. As to the above question, the percentage for primary and secondary schools differed drastically.

20.   About 52% of school principals and teachers agreed that publishers should price teacher's books and textbooks separately; about 48% disagreed. If pricing was done separately, about 39% of the replies stated that schools should be responsible to pay for teacher's books; about 10% thought that parents should be responsible to pay.

21.   About 51% of school principals and teachers agreed that publishers should sell supporting resource materials separately; teaching resources should be bought with school subsidy according to teachers' need; about 49% disagreed.

22.   About 87% of school principals and teachers agreed that the EDB should provide more supporting resource materials for teaching, such as setting up a depository to collect teaching resources (teaching materials, homework, quizzes, activities, exercises) designed by teachers of different subjects and to give awards (e.g. monetary rewards) to those who provided the exemplars.

The Use of Textbooks and Other Supporting Resource Materials

23.   According to the number of replies, the top three support resources that teachers used were: (1) teacher's book, (2) workbooks and answer books, and (3) textbooks; the top three supporting resource materials not used by teachers were: (1) project studies, (2) wall maps, and (3) compact discs for students' learning. The following was the usage of supporting resource materials (the percentage of using the part/complete set) provided by the publishers:

		Publishers did not provide the items	0%	1-25%	26-50%	51-75%	76-100%
A	Textbooks	336	83	94	122	259	1563

		Publishers did not provide the items	0%	1-25%	26-50%	51-75%	76-100%
B	Teacher's book	52	16	61	101	296	2045
C	Workbooks and answer books	130	62	127	195	448	1595
D	Worksheets and answer books	202	89	210	355	719	981
E	Compact discs for teachers	79	41	206	381	703	1150
F	Compact discs for students' learning	647	271	460	485	417	259
G	Project studies	636	320	580	510	333	160
H	Assessment tasks and teachers' guide	269	151	425	518	673	510
I	Wall maps	765	276	447	457	389	209
J	Item banks	144	76	284	398	763	901
K	Website support	153	152	556	599	691	390
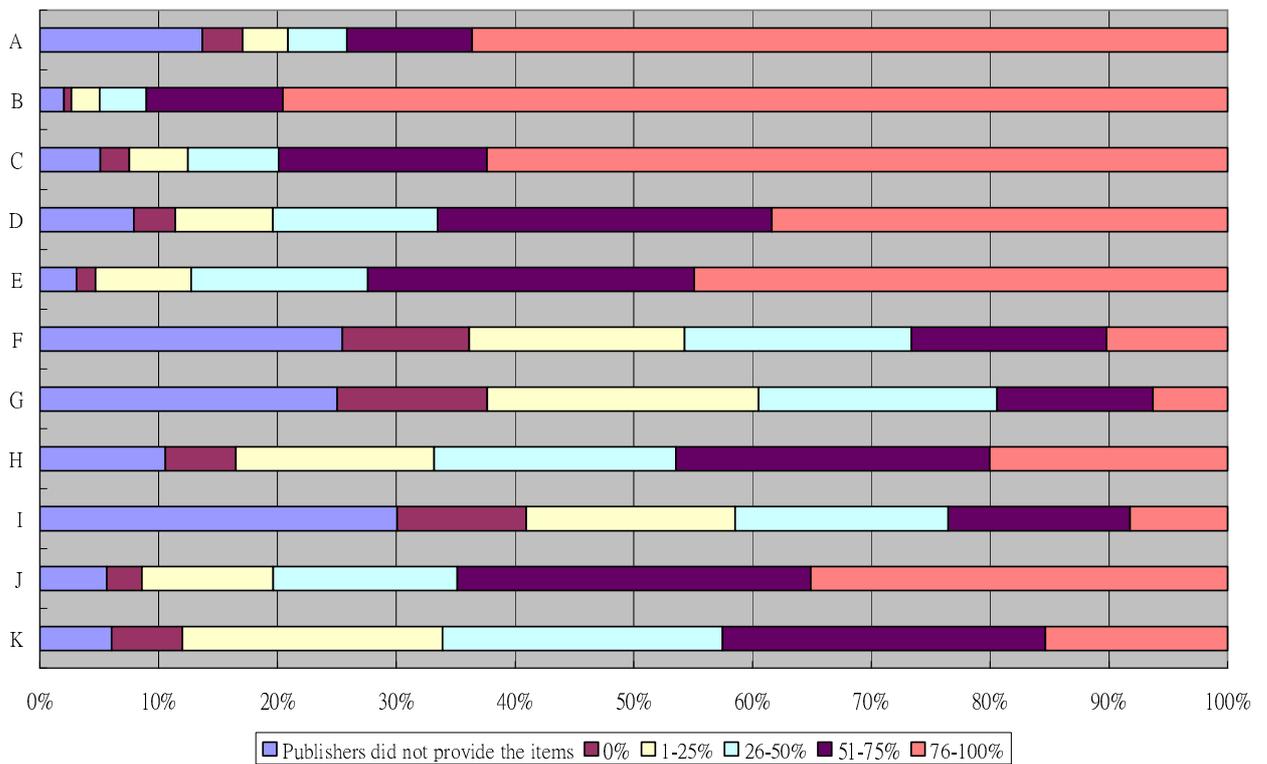
24. The level of teachers' satisfaction on the <u>content</u> of the supporting resource materials provided by publishers:

		Very satisfactory	Satisfactory	Not satisfactory	Very unsatisfactory	Not applicable
A	Textbooks	78	2012	119	9	209
B	Teacher's book	138	2215	131	10	68
C	Workbooks and answer books	92	2032	233	13	195
D	Worksheets and answer books	86	1911	230	16	315
E	Compact discs for teachers	276	1889	254	21	122
F	Compact discs for students' learning	57	1258	259	22	951
G	Project studies	31	1061	384	51	1013
H	Assessment tasks and teachers' guide	66	1687	291	39	458
I	Wall maps	57	1098	274	42	1072
J	Item banks	161	1748	376	49	221
K	Website support	81	1568	471	51	365
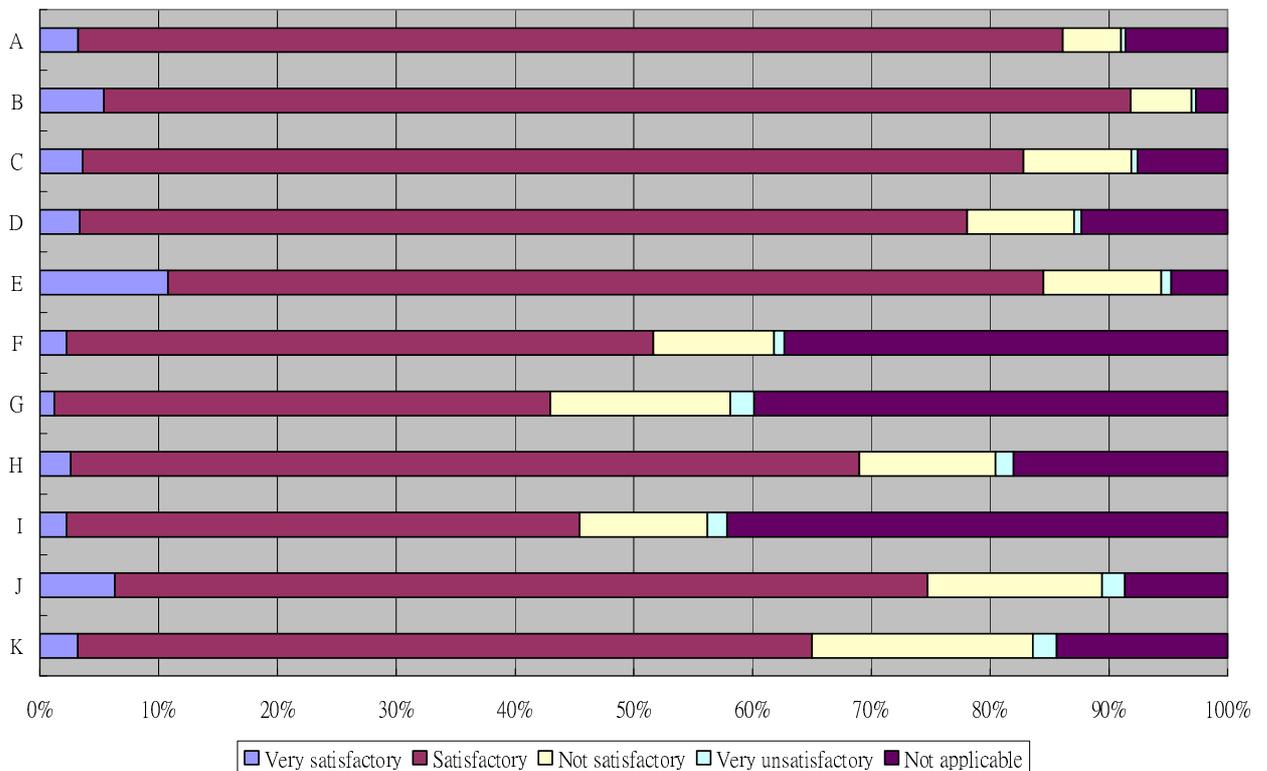
25. The level of teachers' satisfaction on the <u>application</u> of the supporting resource materials provided by publishers in teaching and learning :

		Very satisfactory	Satisfactory	Not satisfactory	Very unsatisfactory	Not applicable
A	Textbooks	87	2023	116	5	209
B	Teacher's book	142	2194	150	6	68
C	Workbooks and answer books	95	2028	228	8	195
D	Worksheets and answer books	89	1878	247	13	315
E	Compact discs for teachers	216	1944	233	19	122
F	Compact discs for students' learning	50	1217	278	22	951
G	Project studies	32	1049	398	36	1013
H	Assessment tasks and teachers' guide	67	1676	317	20	458
I	Wall maps	46	1103	300	25	1072
J	Item banks	151	1753	368	39	221
K	Website support	78	1537	473	43	365
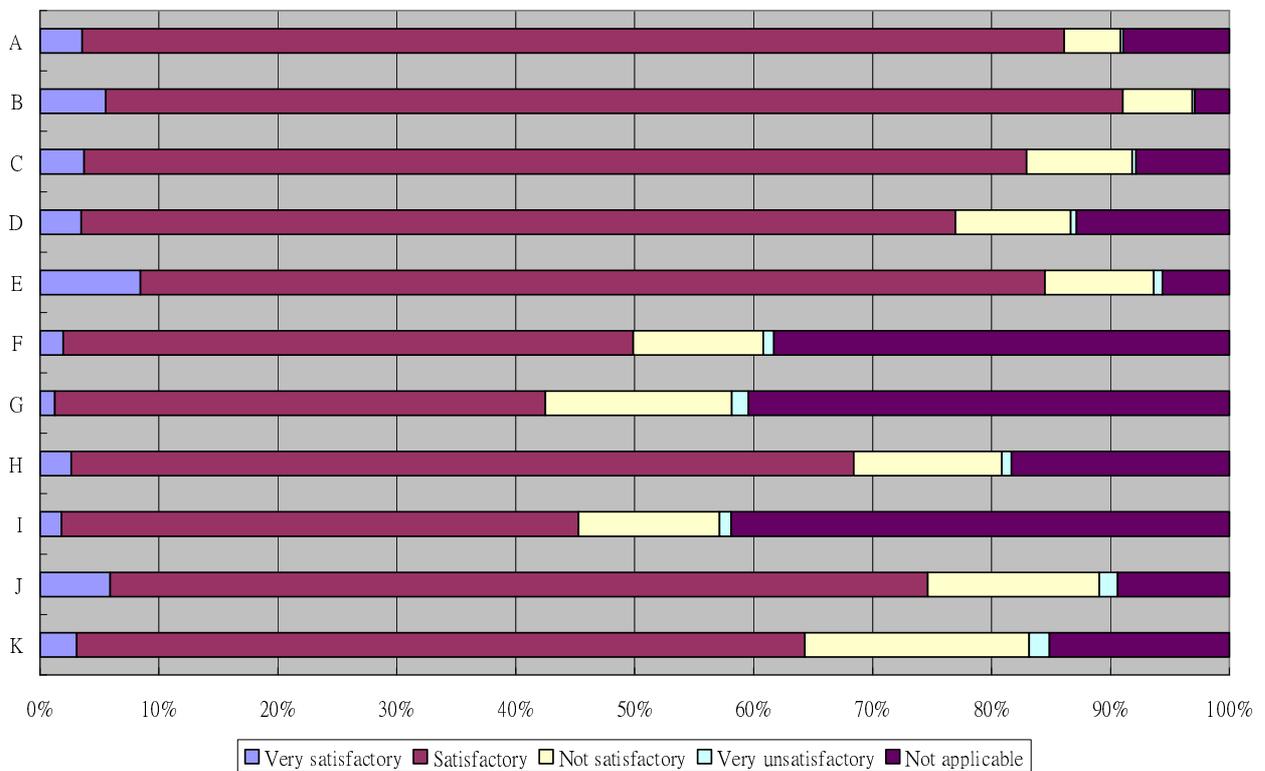
26. Teachers' assessment of the level of help to <u>learning effectiveness</u> rendered by the supporting resource materials provided by publishers:

		Very helpful	Helpful	Could use for reference	Not very helpful	Not helpful at all	Not applicable
A	Textbooks	235	1801	208	21	3	205
B	Teacher's book	283	1843	320	30	5	77
C	Workbooks and answer books	199	1606	498	61	5	185
D	Worksheets and answer books	155	1428	611	76	5	185
E	Compact discs for teachers	329	1484	514	93	11	126
F	Compact discs for students' learning	78	776	618	193	32	838
G	Project studies	39	577	686	247	65	921
H	Assessment tasks and teachers' guide	70	1044	791	179	33	423
I	Wall maps	60	668	553	211	47	992
J	Item banks	265	1269	657	112	26	218
K	Website support	106	1016	791	251	45	322

123
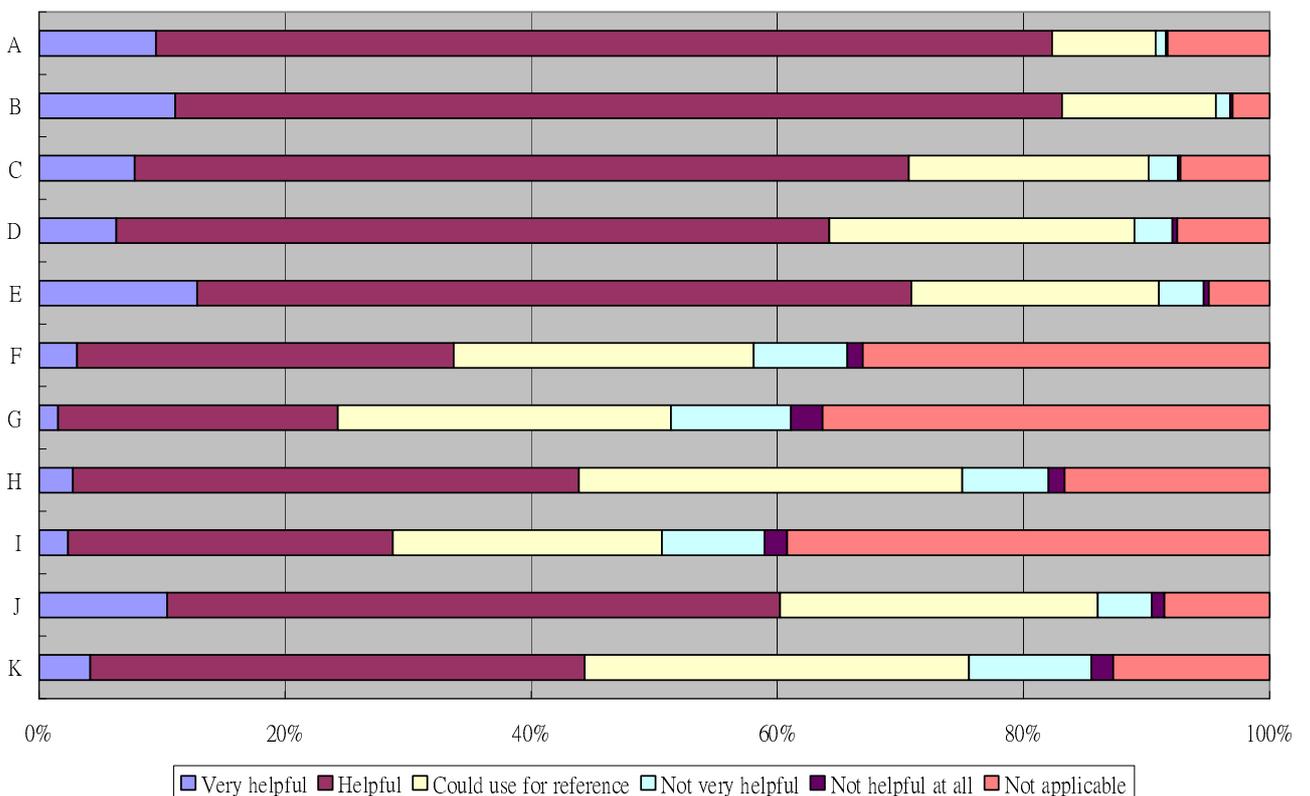
27.   If supporting resource materials and textbooks are to be priced separately and schools have to buy for themselves, most teachers would recommend the schools to buy the following items: (1) teacher's book, (2) compact discs for teachers, and (3) workbooks and answer books. Most teachers would not recommend the school to buy the following items: (1) compact discs for students' learning, (2) wall maps, and (3) project studies. The detailed replies on individual items are listed below:

		Will recommend	Will not recommend
A	Textbooks	1690	792
B	Teacher's book	2394	176
C	Workbooks and answer books	2220	347
D	Worksheets and answer books	1992	550
E	Compact discs for teachers	2257	306
F	Compact discs for students' learning	936	1553
G	Project studies	1046	1463
H	Assessment tasks and teachers' guide	1613	924
I	Wall maps	980	1517
J	Item banks	2056	503
K	Website support	1552	973

Will recommend   Will not recommend
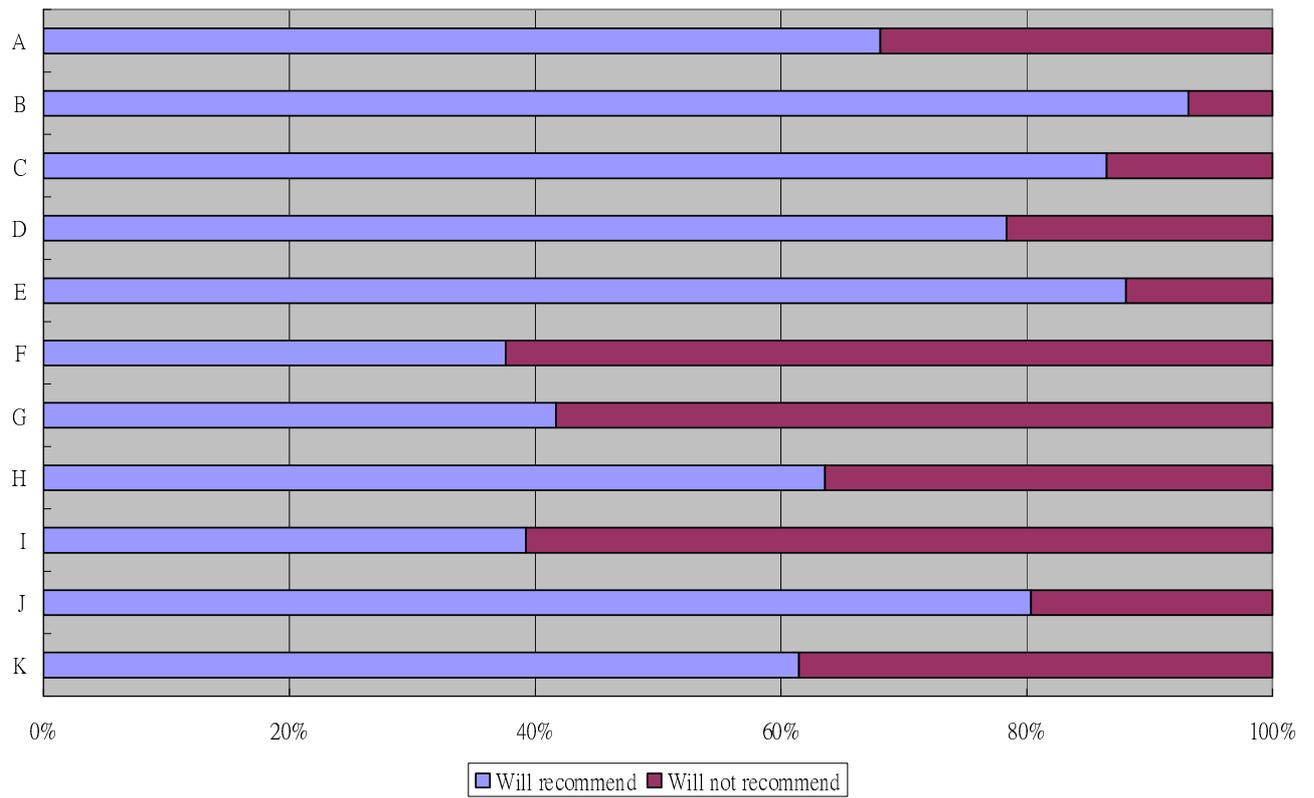
(D) Use of E-teaching Resources

28. The extent of the use of electronic resources/devices in teaching by teachers:

		Frequently	Sometimes	Seldom	Never
A	Multimedia or web-based teaching materials (e.g. pictures, animations, videos / audio-clips, etc.)	1400	992	164	19
B	Multimedia or web-based interactive learning platform	744	1201	517	97
C	Information on the Internet (e.g. newspapers, articles, editorials, etc.)	803	1252	422	84
D	Multimedia or web-based teaching resources provided by publishers	903	1134	414	102
E	School Intranet (e.g. provision of teaching resources, email correspondence, discussion forum, etc.)	979	1020	463	110
F	Electronic resources of the HKEdCity	255	1232	848	236
G	Personal digital assistants (PDA)	95	258	599	1608
H	Desktop computers	1919	453	106	94
I	Laptop computers	889	669	407	600
J	Smartphones	136	188	364	1862
K	E-schoolbag	55	123	263	2106
L	E-books/textbooks	825	503	277	956
M	Compact discs	1229	1054	204	80

Legend: ■ Frequently ■ Sometimes □ Seldom □ Never
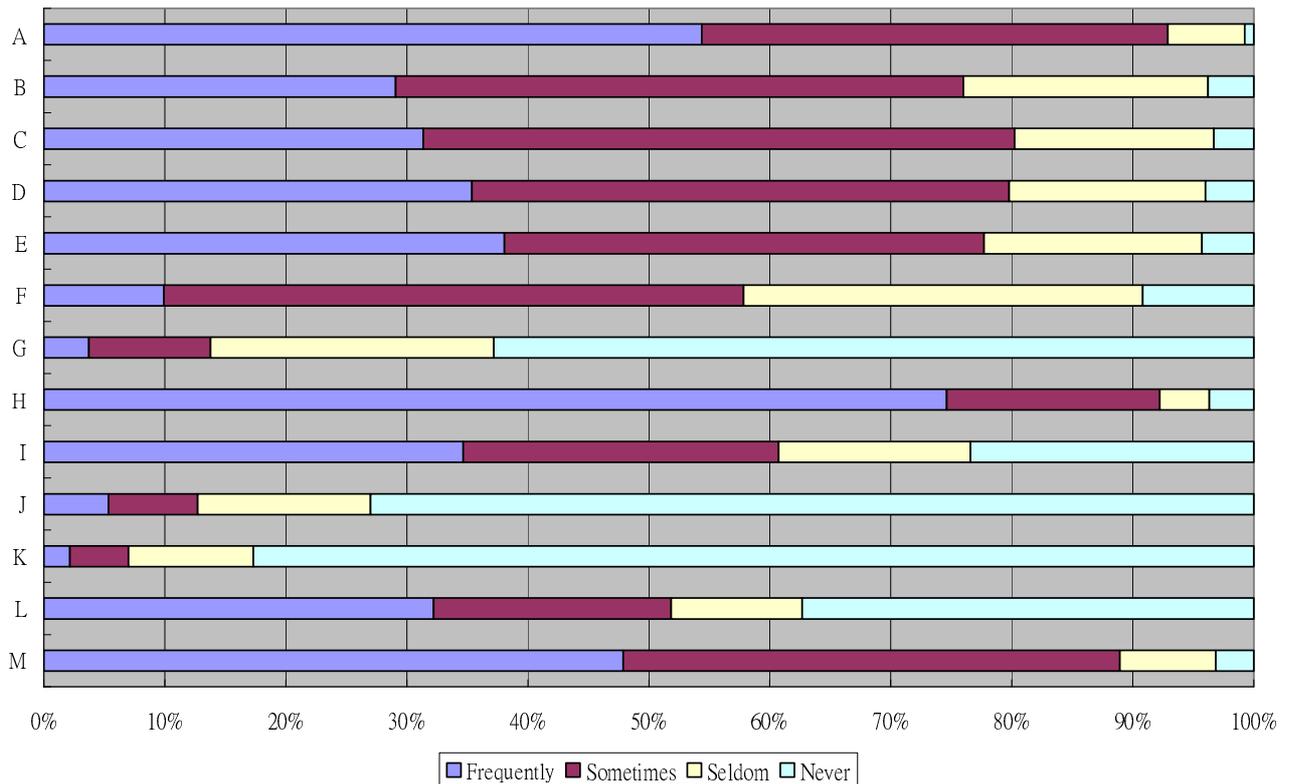
28a. According to the number of replies, the top three electronic resources/devices most frequently used by teachers were: desktop computers, multimedia or web-based teaching materials, and compact discs. The top three electronic resources/devices not being used were: e-schoolbag, smartphones and personal digital assistants.

29. The extent teachers agreed to the following statements describing the use of electronic resources in teaching and learning :

		Strongly agree	Agree	Disagree	Strongly disagree
	Teachers using electronic resources to teach:				
A	Will enrich the contents of teaching	851	1657	63	8
B	Will provide the latest materials for teaching	782	1701	92	13
C	Will facilitate the communication between teachers and students	390	1587	552	53
D	Will assist teachers in explaining complicated concepts	734	1656	166	25

E	Will cater for students' diverse abilities, hence help to stretch the potentials of those talented students and provide support to those weak students	328	1516	666	65
F	Will assist teachers in managing teaching resources	465	1829	251	23
G	Will reduce the production cost of teaching materials	477	1598	431	67
H	Will increase teachers' workload	474	1176	880	50
I	Will increase the difficulties in managing the classroom environment	340	1343	829	65
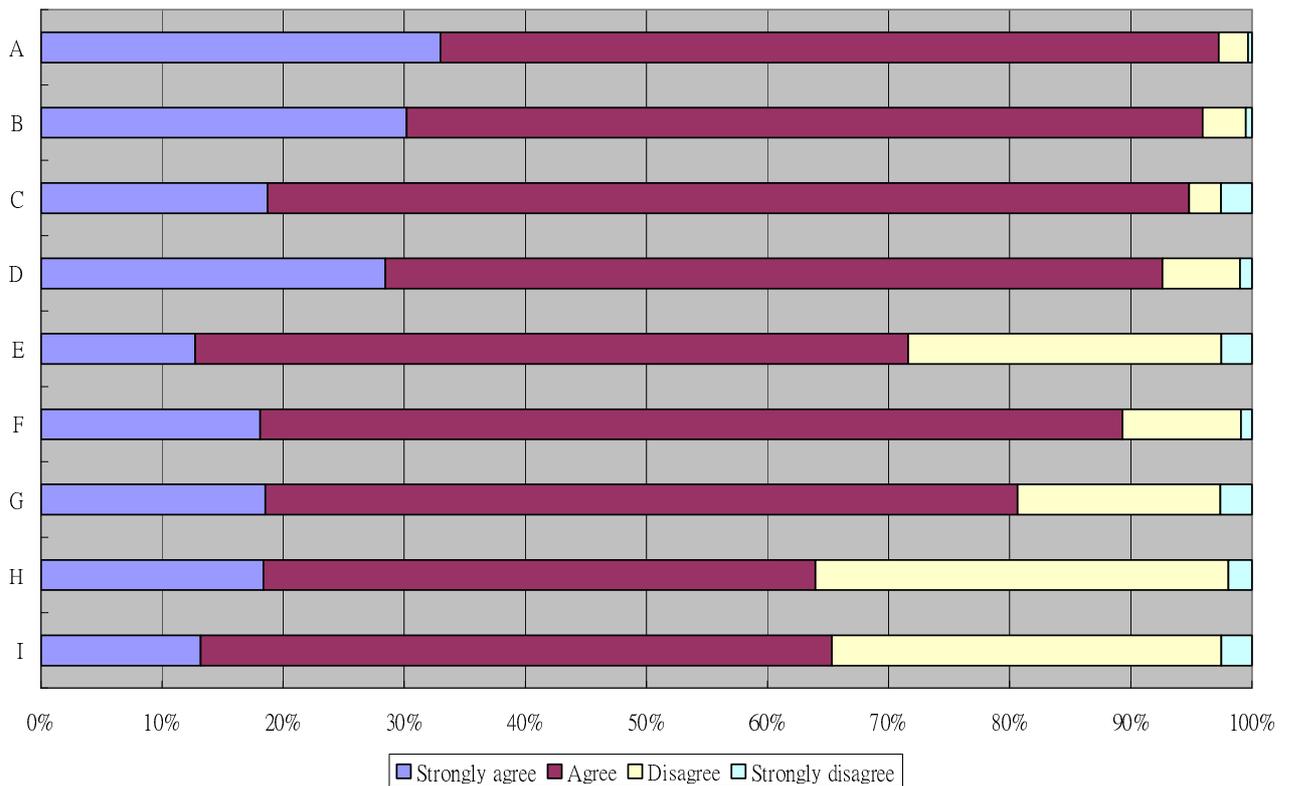
| Students using electronic resources in learning:	Strongly agree	Agree	Disagree	Strongly disagree
A Will increase students' interest in learning and self-learning ability	534	1790	241	23
B Will enhance students' understanding of the subjects	424	1772	365	23
C Will enhance students' ability of communication and collaboration	219	1277	995	87
D Will enhance flexibility for students' learning time	322	1841	379	39
E Will enhance students' creativity	212	1339	952	72
F Will enhance students' knowledge and ability in IT	498	1812	242	28
G Will reduce students' level of concentration	223	1074	1229	53
H Will adversely affect students' health of eyes	472	1311	744	56
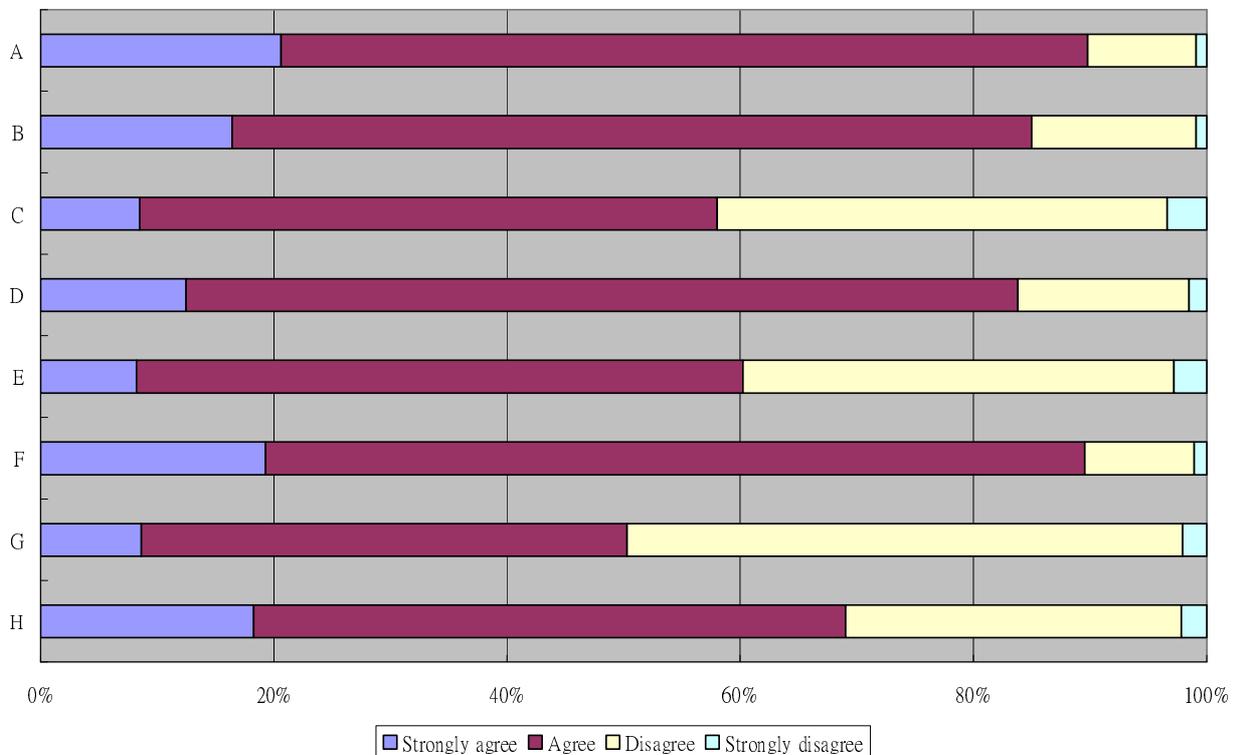
29a. According to the number of replies, teachers agreed the most that using electronic resources in teaching would: (1) enrich the contents of teaching; (2) provide the latest materials in teaching; and

(3) assist teachers in explaining complicated concepts. Teachers disagreed the most that using electronic resources in teaching would: (1) increase teachers' workload, (2) increase the difficulties in managing the classroom environment, and (3) will cater for students' diverse abilities, hence help to stretch the potentials of those talented students and provide support to those weak students.

29b. According to the number of replies, teachers agreed the most that students using electronic resources in learning would: (1) increase students' interest in learning and self-learning ability; (2) enhance students' knowledge and ability in IT; and (3) enhance students' understanding of the subjects. Teachers disagreed the most that using electronic resources in teaching would: (1) reduce students' level of concentration; (2) enhance students' ability of communication and collaboration; and (3) enhance students' creativity.

30. Teachers' level of agreement with respect to the use of the following electronic resources/devices to enhance the effectiveness of **teaching**?

		Strongly agree	Agree	Disagree	Strongly disagree
A	Multimedia or web-based teaching materials	814	1709	56	6
B	Multimedia or web-based interactive learning platform	524	1844	195	13
C	Information on the Internet	535	1894	138	14
D	Multimedia or web-based teaching resources provided by publishers	504	1880	176	8
E	School Intranet	390	1846	316	22
F	Electronic resources of the HKEdCity	304	1911	318	42
G	Personal digital assistants (PDA)	75	774	1237	458
H	Desktop computers	642	1725	162	42
I	Laptop computers	452	1606	373	127
J	Smartphones	74	641	1277	550
K	E-schoolbag	102	968	1049	417
L	E-books/textbooks	340	1444	541	233
M	Compact discs	447	1880	188	57

0% 20% 40% 60% 80% 100%

□ Strongly agree ■ Agree □ Disagree □ Strongly disagree
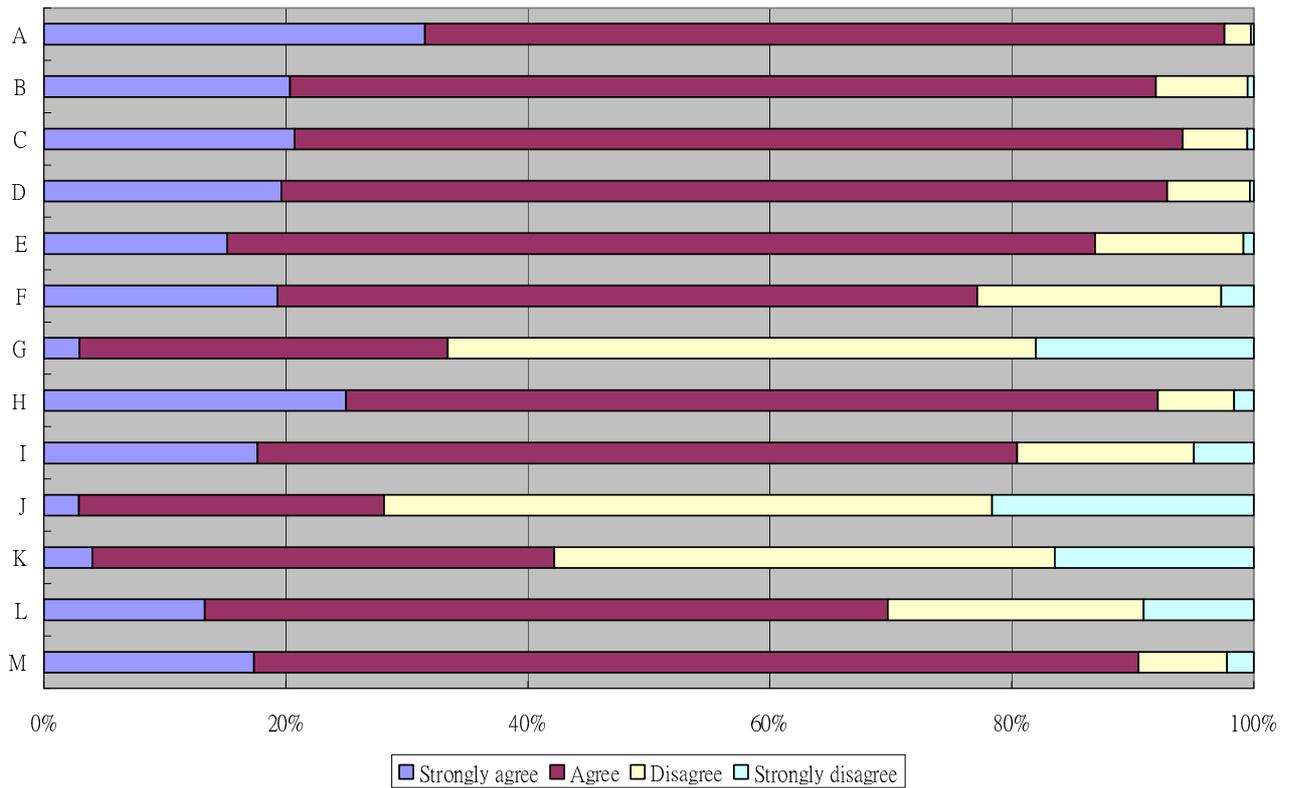
30a. According to the number of replies, teachers thought that multimedia or web-based teaching materials, information on the Internet, and desktop computers could most effectively enhance teaching. Teachers disagreed the most that smartphones, personal digital assistant, and e-schoolbag could effectively enhance teaching.

31. Teachers' level of agreement with respect to the use of the following electronic resources / devices to enhance **student learning**?

		Strongly agree	Agree	Disagree	Strongly disagree
A	Multimedia or web-based teaching materials	620	1861	83	8
B	Multimedia or web-based interactive learning platform	510	1892	158	10
C	Information on the Internet	465	1931	148	13
D	Multimedia or web-based teaching resources provided by publishers	437	1912	197	15
E	School Intranet	366	1880	280	32
F	Electronic resources of the HKEdCity	291	1859	345	62
G	Personal digital assistants (PDA)	88	805	1120	506

131

H	Desktop computers	487	1765	231	66
I	Laptop computers	328	1609	437	169
J	Smartphones	69	668	1190	585
K	E-schoolbag	128	1049	922	423
L	E-books/textbooks	296	1456	548	237
M	Compact discs	356	1856	250	82

Strongly agree ■ Agree □ Disagree □ Strongly disagree
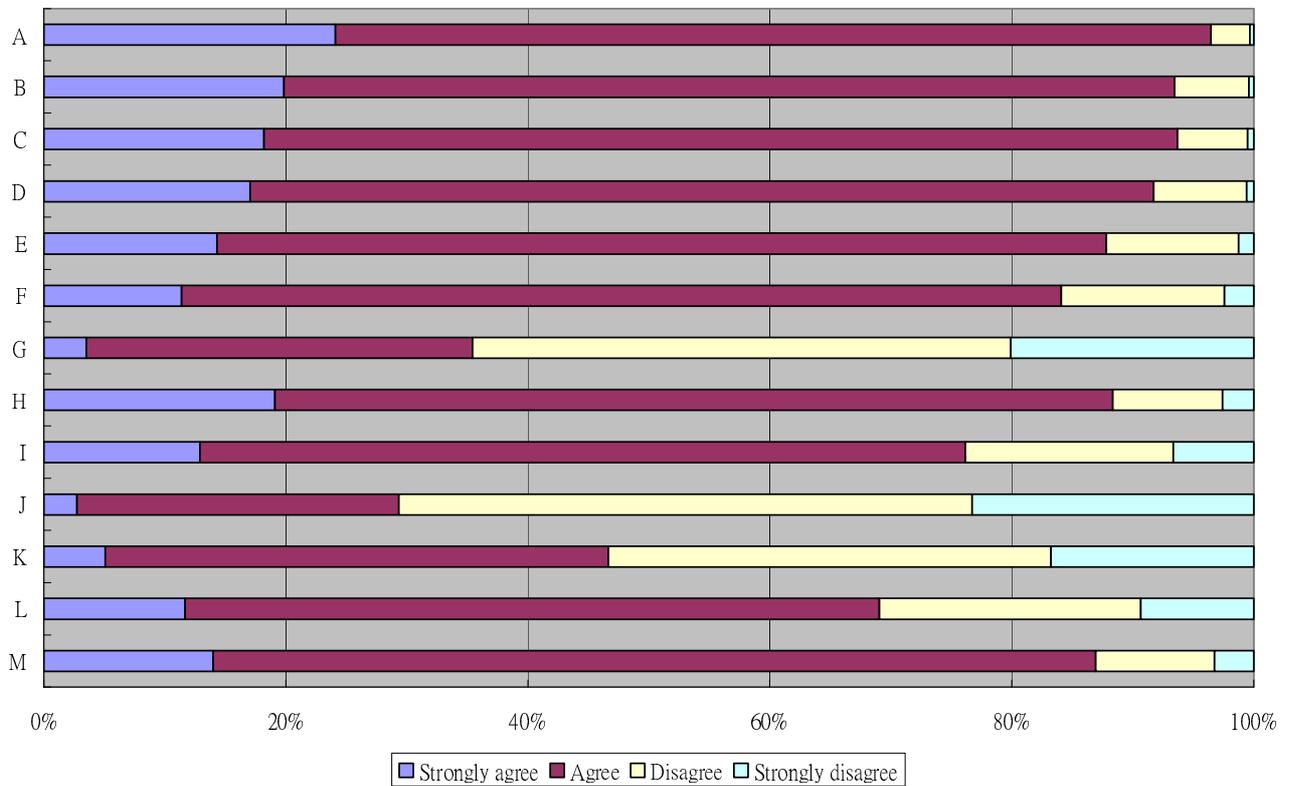
31a. According to the number of replies, teachers thought that multimedia or web-based teaching materials, multimedia or web-based interactive learning platform, and information on the Internet could most effectively enhance student learning. Teachers disagreed the most that smartphones, personal digital assistant, and e-schoolbag could effectively enhance student learning.

32. 43% of teachers (48% for primary schools; 38% for secondary schools) thought that schools currently had enough hardware support (e.g. computer systems, networks, etc.) for the implementation of e-books / textbooks; and about 37% of them (34% for primary schools; 41% for secondary schools) thought that hardware support was not enough.

33. 35% of teachers (40% for primary schools; 27% for secondary schools) thought that schools currently had enough technical support for the implementation of e-books / textbooks; and about

42% of them (39% for primary schools; 46% for secondary schools) thought that technical support were not enough.

34.   57% of teachers (59% for primary schools; 54% for secondary schools) thought that they had the necessary IT knowledge and skills for the implementation of e-books / textbooks; and about 23% of them (20% for primary schools; 27% for secondary schools) thought that they did not.

35.   40% of teachers (39% for primary schools; 41% for secondary schools) thought that the students had the necessary IT knowledge and skills for the implementation of e-books / textbooks; and about 34% of them (35% for primary schools; 33% for secondary schools) thought that the students did not.

The Working Group on Textbooks and e-Learning Resources Development
Collection of Parents' Views on the Web

This questionnaire seeks to collect parents' views on the quality, price and supply of textbooks, and the development and usage of e-Learning resources. The views collected will be taken as reference for the future development of learning resources for students.

(A)   Total number of replies: 12,337

(B)   Summary of Views Collected

1.   Children now studying in:

Secondary schools	2452	23%
Primary schools	8292	77%

2.   Types of schools that children are in:

Government Schools	1925	18%
Subsidised Schools	6128	58%
Caput Schools	362	3%
Direct Subsidy Schools	1656	16%
Private Schools	437	4%

3.   On the whole, satisfaction level on the quality of content of existing textbooks.

Very satisfactory	377	4%
Satisfactory	4013	42%
Neutral	4302	45%
Not satisfactory	540	6%

Very unsatisfactory	233	2%

4. On the whole, satisfaction level on the learning effectiveness of the existing textbooks.

Very satisfactory	361	4%
Satisfactory	3690	39%
Neutral	4505	48%
Not satisfactory	693	7%
Very unsatisfactory	184	2%

5. The extent of agreement regarding schools' involvement of parent representatives in the textbook selection process.

Strongly agree	1822	19%
Agree	5729	61%
Disagree	1594	17%
Strongly disagree	257	3%

6. Factors that parents think teachers should consider when selecting textbooks (in the order of importance) :

Quality of content	8281	30%
Effectiveness on teaching and learning	7228	27%
Textbook prices	4904	18%
Provision of supporting resources (e.g. teaching materials, worksheets, exercises, compact discs, etc.)	4868	17%
Support from publishers (e.g. designated personnel to answer questions on teaching	1418	5%

materials, students' talks, seminar for teachers and seminar on the use of teaching materials, etc.)

Design in editing and printing	751	3%

7. The EDB is responsible for the existing textbook review mechanism conducted in a confidential manner. Do you think that it is necessary to delegate such responsibility to other organisations?

Necessary	4471	52%
Publishers should ensure the quality; Submission for review is not necessary	353	4%
Not necessary	1442	17%
No opinion	2374	27%

8. Follow up on Question 7 - If it is necessary, who should the responsibility be delegated to?

Tertiary institutions	1442	27%
Other educational organisations/groups	1133	22%
Other non-educational organisations/groups	223	4%
An independent committee to be established	2470	47%

9. Views on the best mode of textbook supply

Schools select textbooks and students buy them on their own.	521	6%
Schools select and order textbooks in bulk and parents pay.	1869	22%
Schools buy textbooks and lend them to student and students return them to schools by the end of the school term.	1428	17%
Schools compile teaching materials at their own cost.	418	5%

Schools select e-textbooks and students buy electronic support resources and pay fees for the use of copyrighted materials.	329	4%
Schools select and order e-textbooks, electronic support resources and copyright fee in bulk, and parents pay for them.	714	8%
Schools pay for e-textbooks, electronic hardware, software and copyright fee and lend them to students. Students return them to schools by the end of the school term.	2414	28%
Schools compile e-teaching materials and students pay for electronic support resources	253	3%
No opinion	477	6%
Others	167	2%

10.   Do you agree that schools should buy textbooks and lend them to students; students have to return them by the end of the school term?

Strongly agree	2308	27%
Agree	3455	40%
Disagree	2204	26%
Strongly disagree	609	7%

11.   Do you agree that publishers should price support resources (e.g. compact discs) and textbooks separately?

Strongly agree	1650	19%
Agree	3347	39%
Disagree	2450	29%
Strongly disagree	1128	13%

12.   Who do you think should pay for the supporting resource materials (e.g. teacher's book, compact discs)

Parents	436	5%
Schools	6392	75%
No opinion	1234	14%
Others	498	6%

13. In publishing textbooks, textbook publishers also publish a series of supplementary workbooks for students. Do you think that these supplementary workbooks are necessary?

Strongly necessary	1708	20%
Necessary	4693	54%
Unnecessary	1016	12%
Strongly unnecessary	309	4%
Not sure	373	4%
No opinion	537	6%

14. Do you think that e-textbooks / e-school bags can replace conventional textbooks / school bags?

Yes	3511	42%
In the meantime no	3497	42%
No	1412	17%

15. Do you agree that the supplementary compact discs attached to textbooks are helpful to students' learning?

Strongly agree	815	10%
Agree	2389	28%
Neutral	3167	38%
Disagree	1106	13%
Strongly disagree	555	7%

Not sure	263	3%
Not applicable	136	2%

16. Do you agree that the e-Learning resources provided through the existing e-platforms (e.g. multimedia or web-based platform, school Intranet, the HKEdCity, etc.) are helpful to students' learning?

Strongly agree	1268	15%
Agree	3841	46%
Neutral	2692	31%
Disagree	422	5%
Strongly disagree	163	2%

17. Does your family currently have sufficient hardware support (e.g. computer systems, networks, etc.) for the implementation of e-book / e-textbook?

Yes	5700	68%
No	1251	15%
Not sure	1389	17%

18. Do you think that you have sufficient IT knowledge and skills to help your children to use e-books / e-textbooks in learning?

Yes	4461	53%
No	1836	22%
Not sure	2060	25%

19. Do you think that your children have sufficient IT knowledge and skills to use e-books / e-textbooks in learning in school?

Yes	4699	56%
No	1593	19%

Not sure   2113   25%

20. Are you confident with the quality of content (e.g. accuracy) of web-based learning resources?

Yes   5291   63%

No   3103   37%

Summary of Written Comments of Professional Bodies and Community Groups Submitted to LegCo Panel on Education

The Consumer Council, publisher associations, school councils and Green Sense have submitted their written comments on textbook price, format of publication and the future direction of e-Learning resources development to the LegCo Panel on Education. Their views are summarised as follows:

On Textbooks

(i)   Storybooks should be bought in bulk by schools and use on a rotational basis by students.

(ii)   Textbooks should be recycled. Schools are suggested to buy and provide textbooks to students. Textbooks should be collected and passed to the next cohort of students when the school term is over.

(iii)   The respective cost of teaching and learning materials should be calculated, and then priced and sold separately. Teaching materials should be bought and paid for by teachers so as to reduce the expenses of students and parents on textbooks.

(iv)   The Government should not interfere with textbook pricing under the principle of free market economy. However, it may urge teachers to consider price as a factor when selecting textbooks.

(v)   State clearly on the textbook list the edition or the old version of the reprinted version which can be used so that students and parents can decide whether to use second-hand books. Indicate clearly on the textbook list the reference books that are not strictly required to buy so as to enable students and parents to make their

decision for buying or not. For minor updates, it is recommended that a corrigenda or list of amendments should be distributed to students using old textbooks.

(vi)   It is recommended that schools should collect parents' views when selecting textbooks as they are the ones who pay for the textbooks.

(vii)   The EDB should strictly monitor schools and prohibit them from receiving any gifts or donations including free teaching materials which may increase the production cost to the publishing sector.

(viii)   Provide interest-free instalments to parents so as to relieve their pressure of making one-off payment on textbooks.

(ix)   To clarify to the public that textbooks are not "revised every year", and that the "three-year rule of no revision" has been strictly enforced by the Textbook Committee and the publishing sector.

(x)   The packaging of sample textbooks for schools and teachers should be as plain as possible. No supplementary teaching materials, powerpoints and multiple-choice exercises, compact discs of item banks, etc. should be attached as these are not environmental-friendly and will increase the production cost substantially.

On e-Learning Resources

(i)   It is suggested that the Government should put in resources to develop e-Learning resources so as to enhance the effectiveness of learning and teaching and meeting the development trends of the digitalised society.

(ii)   It is hoped that the development of e-Learning resources will reduce students' reliance on textbooks. The diversified and interactive learning will enable students to acquire self-learning skills.

(iii)   It is recommended that a progressive approach should be adopted in the development

of e-Learning resources. On-going monitoring and evaluation and the promotion of successful experiences are necessary.

(iv)   Comprehensive hardware support and infrastructure facilities, sufficient professional support and teacher training will help the implementation of e-Learning.

Overseas Experiences - Supply and Control of School Textbooks

(Reference material adopted from *International Review of Curriculum & Assessment Frameworks* (INCA) (June 2009)[51]

	Textbook development	Approved textbook list or textbook list provided by the government	Who selects textbooks for use in class	Textbook supply
England	By commercial sector	No	Teachers – free choice	School provides or lends
Ireland	By commercial sector; Ministry provides guideline, some parts may be outsourced	No	Teachers – free to choose	Parents usually buy or borrow from schools
Northern Ireland	By commercial sector	No	Teachers – free to choose	School provides
Scotland	By commercial sector	No	Teachers – consult with the school board	School provides
Wales	By commercial sector	No	Teachers – free to choose	School provides or lends
France	By commercial sector – the government approves local organisations to provide teaching materials as a supplement to textbooks used in the nation	Government specifies the content and format, approves all the textbooks used in schools, and provides approved textbook list	Teachers – select from the approved textbook list	Compulsory education – free; after compulsory education – usually bought by parents
Germany	By commercial sector – subject to government's approval	Government specifies the price, content, format and quality, and provides approved textbook list; religious textbooks need to be approved by church authorities	Teachers – select from the approved textbook list (at times depends on the approval of the inspectorate or in consultation with parents and students)	School provides or lends

---

[51] Website: http://www.inca.org.uk/

Hungary	By commercial sector – government approves; government provides bank loan to publishers	Government specifies the content, and provides approved textbook list; teachers are free to choose other information as support materials	Teachers – usually select from approved textbook list	Parents buy (assistance given to low-income families), textbooks of language education for ethnic minorities are provided by government
Italy	By commercial sector	Government formulates guidelines on price and the number of revisions, but does not specifies the content	Teacher council - free to choose	Primary school textbooks are supplied free; secondary school textbooks bought by parents
Netherlands	By commercial sector	Nil (government specifies learning objectives, but will not specify or publish teaching resources)	Teachers – free to choose	Supply/lend primary school textbooks; secondary school textbooks are mostly bought by parents, but some schools lend textbooks
Spain	By commercial sector (monitored by government); a central organisation will assist in developing curriculum/teaching materials and teachers' guide	No specification; teacher associations provide approved textbook list through local governments	Schools/teachers – select from approved textbook list	Usually bought by parents (assistance given to low-income families)
Sweden	By commercial sector	No	Teachers – free to choose	School provides
Switzerland	By local government (only for compulsory education)	Local government usually specifies the content, and provide approved textbook list (only for compulsory education)	Schools / teachers – usually select from approved textbook list (teachers are free to choose textbooks at senior secondary level)	School provides (senior secondary textbooks bought by parents)
Australia	Mostly by commercial sector (subject associations may publish support materials)	No	Teachers – free to choose	Usually bought by parents (or borrow textbooks from schools)
Canada	By commercial sector (government approves); local governments also publish pilot	Local governments usually provide approved	Local governments or schools usually select from approved	Schools usually supply textbook free of charge

	textbooks	textbook list	textbook list	
Japan	By commercial sector (government approves or distributes)	Government approves; the business sector publishes (but with specified content for some textbooks)	Local education associations or school principals select from specified textbook list	Compulsory education – all the students receive new textbooks free each year; after compulsory education, usually bought by parents/students
South Korea	Government or by commercial sector (government approves or authorises)	Government publishes some textbooks, and approves or authorises the publication of other textbooks	Used to have only one textbook for each subject; each subject now adopts several sets of textbook for teachers' selection; copyright owned by government and subject to government's approval	Free supply of primary school textbooks (students can keep the textbooks); secondary school textbook usually bought by parents/students
New Zealand	By both government and commercial sector (Learning Media is a company fully-owned by the government which publishes a series of resources for free supply to schools; not compulsory for schools to use them)	No	Teachers – free to choose	Schools lend textbooks and parents buy additional materials, especially after compulsory education (senior secondary)
Singapore	By both government and commercial sector (with government's approval)	Government specifies the content and provides approved textbook list, all the approved textbooks could be found in the textbook list for 5 years	Teachers - from the Approved Textbook List	Parents bought (free for low-income families)
U.S.A.	By commercial sector (mainly by 10 publishing companies)	Half of the states have their approved and recommended textbooks (according to curriculum guides of the state)	Teachers (school committee) select; half of the states select from the approved textbook list (e.g. in California, all schools select textbooks from the textbook list unless being exempted)	In most of the states, schools supply textbooks free; in some states, parents bought them from schools (excluding low-income families). Some senior

secondary schools may
solicit donations from
students to cover
textbook expenses

Experts' Views on
Impact of the Use of e-Learning Resources on Students' Eye Health

List of Specialists consulted

1.	Professor Clement C.Y. THAM	Specialist Consultant in Ophthalmology at the Department of Ophthalmology & Visual Sciences, The Chinese University of Hong Kong
2.	Professor Carly LAM	Head of School of Optometry, The Hong Kong Polytechnic University

Comments/Recommendations

1. How to protect eyes

   (i) Good reading habits

   - Distance to the book: 40cm

   - Distance to monitor of computer: 70cm

   - Take a rest for 30 seconds in every 30 minutes

   (ii) Appropriate equipment

   - Screen with higher resolution will make eyes less tired.

   - Appropriate brightness of screen. Use dark-coloured words on a light background for easy reading.

   - Appropriate font size, line spacing and character spacing.

   (iii) Good reading environment

   - The environment should be evenly lighted with a warm colour tone.

   - The screen should be below eye level.

2. There has not been any research confirming that the use of computer will lead to short

sightedness or worsen the short-sightedness among students. There are also no confirmed findings on whether computer has radiation and will adversely affect health.

3. Hereditary and environmental factors are the two major causes of short-sightedness. For environmental factors, if the eyeballs are under tension on a long-term basis, the chance for short-sightedness will increase correspondingly. Thus, e-Learning resources are not the direct factors for short-sightedness. Rather, it is the proper use of e-Learning devices that counts.

4. Students are not good at self-control. If e-teaching is to be implemented, classroom supervision and care should be strengthened.

5. There are similarity in reading e-books and reading regular books. Both rely on the surrounding lights. However, reading with a computer needs the light on screen as well, and this may dry up eyes. Therefore, the means of a suitable environment for reading e-books is different from that required for reading on a computer.

6. Big fonts are not necessarily better when reading on a computer. Fonts being too big will also lead to short-sightedness. Whether the screen and font size is appropriate depends on the environment and the distance between the users and the screen. The most ideal case is that when we are reading on the monitor, we can also see the surrounding environment. Generally speaking, "half a word" for character spacing and "one word" for line spacing are best for reading. The best page size on screen is A5 and the font size 10-12 when compared with regular books. This can serve as reference when implementing e-Learning.

7. It is recommended that efforts should be paid to develop computer screens that will not lead user's eyes getting tired easily. On the other hand, the public needs to be educated that proper use of computer products will not adversely affect the health of their eyes.

8. It is recommended that the proper use of computer should be promoted to the public. Concurrent to the implementation of e-learning, there is also a need to keep monitoring and improving the conditions so that a healthier learning environment can be provided for students.