



# 在職校長 專業發展需要分析課程

香港校長專業發展需要分析辦公室

焦點四：

## 資訊科技 與電子學習

焦點





香港校長專業發展需要分析辦公室：  
在職校長專業發展需要分析課程  
焦語四·資訊科技與電子學習

- 著者： Allan Walker and Terrence QUONG
- 譯者： 鍾潔芬
- 編審： 張文彪、陳榮光、黃詩麗、黃若嫻、林惠玲
- 總編輯： 吳茂源
- 出版者： 香港中文大學、香港教育領導發展中心
- 地址： 香港 新界 沙田 香港中文大學 香港教育領導發展中心
- 電話： (852) 2603 5790 或 (852) 2603 5203
- 圖文傳真： (852) 2603 6761 或 (852) 3163 4127
- 電子郵遞： NAFPhk@fed.cuhk.edu.hk
- 網址： <http://www3.fed.cuhk.edu.hk/ELDevNet>
- 校對： 諸殷傑、黃鳳安、陳詩慧
- 電腦排版： 諸殷傑、鍾潔芬、陳詩慧

©Allan Walker and The Education and Manpower Bureau 2005 

版權所有，不得翻印。未經版權持有人同意，不得以任何電子或機械的形式及媒體  
(包括影印、錄製或任何資訊存取系統)，複製或傳送本著作任何部份。



## 你不能以既往的資訊科技概念 來協助學生為未來的真實世界預作準備

對未來最穩當的假設，是屆時所有學生都會使用資訊科技，並會受數碼媒體包圍。

第二個穩當的假設，是在未來五年，會產生許多應用於學習的資訊科技方法，這些方法都是前所未有的。

第三個穩當的假設，是在職校長永不會有足夠的時間，使自己稔熟尖端科技的變化及它們在教育上的應用。



「出現我們這個焦慮的時代，很大程度上源於使用  
不合時宜的工具來從事目下的工作。」

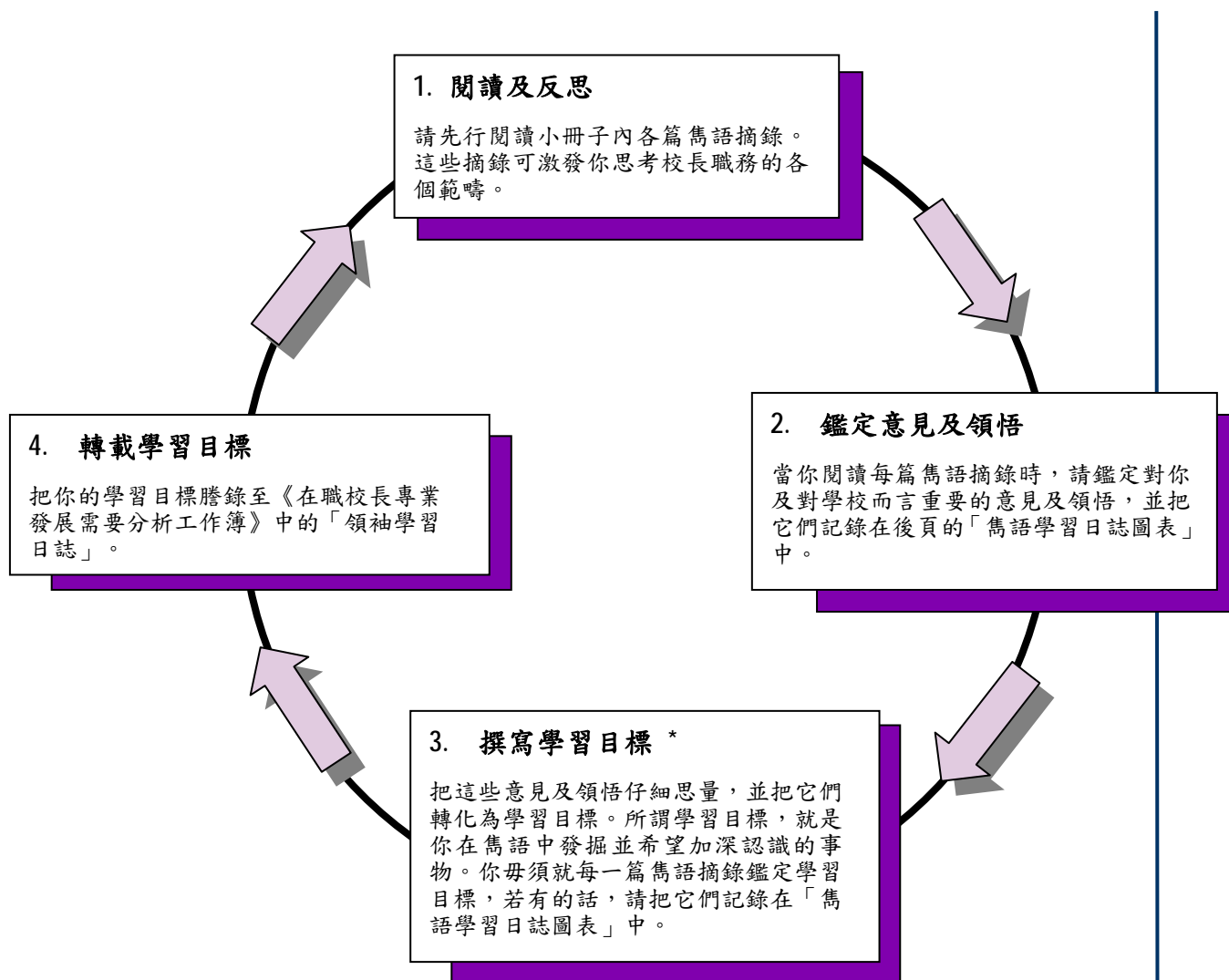
- 馬歇爾·麥克魯漢  
(Marshall McLuhan)

## 目次

---

使用說明	3
雋語學習日誌圖表	4
雋語摘錄一 • THE DESIGN OF SCHOOLS IN THE 21ST CENTURY	7
雋語摘錄二 • LIFELONG LEARNING IN THE 21 ST CENTURY	8
雋語摘錄三 • 教育資訊化的目的、內容與意義	9
雋語摘錄四 • WHAT ARE EBOOKS?	11
雋語摘錄五 • THE ALWAYS-ON CITY OF THE FUTURE	12
雋語摘錄六 • THE IMPACT OF INFORMATION TECHNOLOGY ON SCHOOL MANAGEMENT	13
雋語摘錄七 • ICT AND BOYS	14
雋語摘錄八 • LEARNING OBJECTS	15
雋語摘錄九 • THREE UNWORTHY VISIONS OF THE IT FUTURE	17
雋語摘錄十 • HOW IT LITERATE ARE YOU? A SKILLS AUDIT	19
雋語摘錄十一 • TECHNOLOGY AND BEHAVIOUR MANAGEMENT – IDENTIFYING STRATEGIC INTENTS	21
雋語摘錄十二 • SELF ASSESSMENT TOOL	22
技能稽核 - 我在資訊科技方面效率如何?	24
總結	25

# 使用說明



- 學習目標就是你在雋語中發掘並希望加深認識的事物，它應與你從雋語中所鑑定的意見及領悟相關。

## 雋語學習日誌圖表

日誌是一份記錄或日記，記載你在閱讀雋語後所取得的進展。

下列為「雋語學習日誌圖表」的結構及騰錄例子。

日期	雋語摘錄	從雋語中啟發的意見及領悟	學習目標
8/5/05	雋語（六）： 什麼是電子書？	什麼是電子書？它們是否合乎成本效益？	<b>目標：</b> 探視在自己學校中使用電子書的可行性 - 聯同英文科主任及圖書館主任發展一項計劃，研究這個提議是否可以節省費用。

當你閱讀小冊子內各雋語摘錄時，請填寫下頁的圖表，然後將學習目標騰錄至《在職校長專業發展需要分析工作簿》中的「領袖學習日誌」。

雋語學習日誌圖表：資訊科技與電子學習

日期	雋語摘錄	從雋語中啟發的意見及領悟	學習目標

\*將最重要的學習目標騰錄至《在職校長專業發展需要分析工作簿》中的「領袖學習日誌」。

焦點學習日誌圖表：資訊科技與電子學習

日期	焦點摘錄	從焦點中啟發的意見及領悟	學習目標

\*將最重要的學習目標騰錄至《在職校長專業發展需要分析工作簿》中的「領袖學習日誌」。

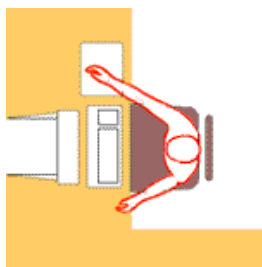


## 雋語摘錄一 • The Design of Schools in the 21<sup>st</sup> Century

Few school educators would deny the impact, or the value of ICT on education. One strong advocate of ICT in education and training is Professor Schank (Professor of computer science and psychology at Yale University). Schank (quoted in Fielding 2000) suggests that if schools are to take full advantage of what ICT has to offer they must change radically. In his admittedly radical view, education and training should be reengineered and classrooms abandoned. He even states that instead of attending classes: "We should spend about 1/3 of our day at the computer, 1/3 talking with others and 1/3 making something". Under such a system traditional content offerings would shift to a focus on lifelong learning and areas such as:

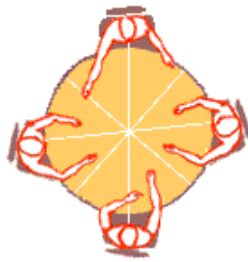
- Stress management
- Getting along in groups
- Communication
- Cultural literacy
- Health
- Math as needed
- Life decisions
- Business skills
- Daily physics (how things work)
- Philosophy of life

Schank's (2000) idea of a school in the 21<sup>st</sup> Century is that it would not have any classrooms. Rather, it would be designed around three learning areas. The computer learning work station, the talking/social learning area and the learning by doing active zone. This design for a 'virtual' school is described below.



**Computer Learning Work Station**

- Library carrel
- 4-10 student work station
- Private workstation
- Hall niche with laptop
- Garden bench with laptop
- Home workstation
- Public workstation (library)



**Talking / social learning area/ conferences**

- Small conference room
- Large meeting room
- Media resource area
- Hallway (standing)
- Cafeteria or snack area
- Garden steps, bench
- Entry hall / common room



**Learning by Doing Active Zone**

- Tech or science lab
- Woodwork, machine shop
- Garden
- Dance studio
- Playing field / gym
- Retail store
- Professional Office
- Museum / Zoo

Extracted from:

Schank, R. C. (2000). *Virtual learning: A revolutionary approach to building a highly skilled workforce*. NY: McGraw-Hill.

Fielding, R. (2000). The death of the classroom, learning cycles and Roger Schank design share planning news. Retrieved 9 October 2003, from <http://www.designshare.com/Research/fielding/>

## 焦語摘錄二 · Lifelong Learning in the 21<sup>st</sup> Century

The construct of 'learning societies' in the 21<sup>st</sup> Century has been dominated by an enormous growth in digital media. Computers, the internet and Information Communication Technology (ICT) in general is reshaping education in the 21<sup>st</sup> Century in the same way as the printing press transformed the educational organization (the school) and the process of learning (work and society, etc) in the 19<sup>th</sup> century. Spender (2002) describes the nature of lifelong learning as the change from the old to the new:

- From *education as a right*, as an established system, to *learning as a commodity*, where the consumer can choose (and where learning products, increasingly, can be purchased).
- From *education which controls entry*, (which regulates availability), to *learning for all* (deregulation).
- From *education as a qualification or credential*, to *learning and skilling as a lifestyle*, where instead of working your way through someone else's prepackaged information, you 'cherry pick' from all the available courses to get the skills you need for the work you want to do.
- From *education as a scheduled activity*, to *learning any time, any place, any pace*; whatever you need as long as you want it – and you only pay for what you use.
- From *taking in content* (studying), to *making information*, doing something with the resources, creating something new – a solution, process and methodology.
- From *memory testing to the demonstration of performance*; it's not what you know (which has little value in itself) but what you can do with it – the value is not in the known but in the new.
- From *competitive to collaborative practices*; whereas the book, the essay and the exam, have all been isolated activities, the online and networked environment allows for a much greater degree of collaboration.

Extracted from:

Spender, D., (2002) *e-Learning and its future*. Paper for the Conference Connecting the Future: Global summit of online knowledge networks, Adelaide 4-5 March 2002.

## 雋語摘錄三 · 教育資訊化的目的、內容與意義

資訊社會的高度發展要求教育必須改革以滿足培養面向資訊化社會創新人才的要求，同時，資訊社會的發展也為這種改革提供了環境和條件。資訊技術在教育中的廣泛應用必將有效地促使教育現代化。教育資訊化是教育面向資訊社會的要求和必然結果。

### 教育資訊化的目的

教育資訊化的目的是培養跨世紀的創新人才，是實現教育的現代化。教育資訊化應以新的教育思想、教育觀念指導資訊技術在教育的各部門、各個領域廣泛應用，應根據創新人才培養的要求，利用資訊技術，探索新的教育模式，促進教育現代化。

教育資訊的內容	教育資訊化對學校產生的變革
<ol style="list-style-type: none"> <li>1. 教育資訊環境的完善</li> <li>2. 教育資訊的建設和使用</li> <li>3. 人才的培養</li> </ol>	<ol style="list-style-type: none"> <li>1. 教師的運用                             <ul style="list-style-type: none"> <li>• 從知識的傳遞者轉為學習的組織者和協調者</li> <li>• 促進學習網路的形成</li> <li>• 對學生資訊能力的培養</li> </ul> </li> <li>2. 對學生的要求</li> <li>3. 對教育設施的要求                             <ul style="list-style-type: none"> <li>• 學習資源的通信功能</li> <li>• 教學設施的網路化</li> <li>• 多媒體學習環境的完備</li> </ul> </li> </ol>

### 教育資訊化的意義：

#### 1. 是實現教育現代化的重要步驟

教育資訊化是教育現代化的重要內用，是實現教育現代化的重要步驟。沒有教育的資訊化，就不可能實現教育的現代化。

#### 2. 有利於全體國民質素的提高

教育資訊化使受教育者的學習不受時間和空間的限制，改變了以學校教育為中心的教育體系，保障了每一國民接受教育的平等性。教育資訊化為全體國民提供了更多接受教育的機會，對提高全體國民質素有重要的意義。

#### 3. 促進創新人才的培養

學生利用教育資訊化的環境，通過檢索、收集、處理和創造資訊，實現發現學習、問題解決學習，並實現知識的探索和發現，對培養創新人才有重要的意義。

#### 4. 促進教育理論的發展

教育資訊化的過程是資訊科學在教育中不斷應用的過程，在這個過程中出現的許多問題和現象，往往需要用資訊科學的理論、方法才能進行解決及增加認識。這個過程將孕育出一門新興的學科——教育資訊科學的發展。

#### 5. 促進教育資訊產業的發展

全國有六十多萬所學校，有上億的學生，在這些學校全面地實施教育資訊化，對我國的資訊產業和經濟發展孕育著一個極大的商機，提供了一個很大的發展機遇。

本文內容摘自：

傅德榮。【教育資訊化的目的、內容與意義】。中國教育和科研計算機網。  
<http://www.edu.cn/20011226/3015403.shtml>

## 雋語摘錄四 • What Are eBooks?

**MAYNARD, Mass., Feb. 4, 2003** -- In a move designed to give schools an affordable way to use eBook technology, Palm Digital Media Inc. and Lightning Source Inc. introduced the Classics Collection, a selection of classic literature that gives students, teachers and administrators unlimited use of up to 500 eBooks for an entire school year.

"This collection provides schools with a cost-effective way to easily distribute books to students," said Mike Segroves, director of business development at Palm Digital Media. "eBooks cannot be lost, stolen, or damaged and the license entitles the school to internally distribute as many copies of the eBooks as it wants, as many times as it wants throughout the school year. The use of eBook literature in schools is just beginning and eTextbooks are on the horizon. We expect the use of these digital materials to keep pace with the investment schools make in technology in the coming years."

"Today Palm Digital Media sets in motion a new future for students - a future that may do away with 20-pound backpacks," said J. Kirby Best, President and CEO of Lightning Source. "With the Classics Collection, students will have the luxury and convenience of an entire electronic library at their fingertips. Lightning Source is delighted to be part of creating this future."

The use of technology in schools is expected to grow quickly. According to IDC, computer hardware will continue to make up the largest share of district technology budgets, accounting for 26 percent of spending in the 2005/2006 academic year. The K-12 market is moving from desktop PCs towards notebook computers and smart handheld devices. This shift will rapidly accelerate at the start of the 2003-2004 academic calendar. (Source: *IDC: The Education eVolution: The U.S. Public K12 Education IT*).

Schools receive the Classics Collection on a CD that can be loaded on the school's server. The eBooks are listed on the school Web site by both title and

author, or can be located by using the browser's built-in search function. Users simply click on the selection and download it in less than a minute to Palm Powered™ handheld computers, the Palm Powered portable computer Dana, from AlphaSmart, Pocket PC devices, Mac and Windows desktop and notebook computers and Microsoft's Tablet PC version of Windows XP. For schools without Web sites, Lightning Source will offer to host the service for a small annual fee.

Extracted from:

Press Release: Palm digital media and lightning source unveil eBook classics collection for schools

## 焦點摘錄五 • The Always-on City of the Future

Mobile technologies are becoming increasingly pervasive in developed economies. Mobile phones are already ubiquitous, laptop computers are widely used in business and academia and handheld devices are beginning to gain a foothold in the market. As computers increase in power and memory size, while size, power consumption and cost all fall, we can expect to see the advent of two related phenomena:

- Wearable computing, in which users increasingly carry or wear powerful, context-aware devices that aim to do the right thing for the user, at the right time and in the right place.
- Ubiquitous computing, in which functionality migrates from distinct computing devices into the fabric of everyday life

Imagine you've just stepped off a long train journey into a city you don't know. In order to get your bearings and relax for a moment after the journey, you want a long, cool drink. But how do you find the nearest coffee shop? Just wander until you stumble across one? No. Researchers at Bristol University's Department of Computer Science, working with HP Labs Bristol, have developed a prototype arm-mounted wearable computing system – the eSleeve – which will help you locate that longed-for canteen.

Simply utter "find canteen" into the speech recognition module embedded in the eSleeve, wait while a Global Positioning Satellite (GPS) receiver calculates your position, and your wristwatch display will then list for you the nearest three, providing directions courtesy of an electronic compass and contextual data handled by a microcontroller within the sleeve. It will even 'beep' when you're heading in the right direction. The only drawback, says Cliff Randell of Bristol University, and one of the team behind the device, is that "it might have trouble recognising your voice".

Beyond the surface-level frivolity of the drink device, however, lies some of the most advanced thinking so far about the ways in which humans will interact with mobile technology in the future. Personal Digital Assistants (PDAs), laptop computers and mobile phones, now so commonplace, are precursors to this potential for development.

Extracted from:

Willaimson, B. (2003). HP Labs/Bristol University wearable computers project. *NESTA Futurelab*. Retrieved 9 October 2003, from <http://www.nestafuturelab.org/archive.htm>

## 雋語摘錄六 • The Impact of Information Technology on School Management

Developments in communication and information technology not only provide new management tools but also to have a profound impact on how schools operate and the nature and arena of learning. While it is important for technology to remain the tool rather than the driving force, it is important to recognize that technology enables things to be done in different ways and so it hold the potential to change behaviour and perceptions of what is possible. The challenge for education leaders is to create a symbiotic relationship between the change forces impacting on people, structure, organization and technology.

Essentially, IT has been used as a tool to support the enquiry response, as well as operational and control aspects of teaching and learning, rather than the strategic aspects. The same is true of management – organizations that implement computerized management information system without making appropriate changes to their organizational structure and management styles are likely to have a poor return on their investment. In addition, experts have discovered that education is a specialist market and that users will not change their behaviour until it becomes more efficient, effective and economic to use such systems.

There are many specific management strategies and approaches that educational leaders can take in order to position themselves to exploit the new communication and information technologies as they become available. Whilst new technology will challenge the status quo, it remains a tool to be used to achieve the vision and goals of the institution. The challenge which senior managers have is to establish the values which underpin the operation of the new learning centers and hence their form of organization and operation. Once the vision exists and strategies are developed to reach such a vision, then leaders and managers are in a position to identify and communicate the decision-making processes within the organization and to shape the

flow of information and communications structure. In such a systems approach, individuals, teachers and the institution as a whole are aware of their key areas of responsibility and know for what they are accountable. Consequently, they will know what data they need. This kind of system, which focuses on the people in the system and their interaction, is different from normal design of management information system, which asks what data can be captured rather than what information is needed.

To know how to exploit the technology will require technological competence on the part of educational leaders and managers. At present, most pupils leaving primary school are likely to have had more experience of using a computer than many headteachers. Keeping informed of new technological developments at a strategic level will be one of the key tasks of future leaders and managers.

Extracted from:

Warwick, J. (1997). Information management. In B. Davies and L. Ellison. (eds.). *School leadership for the 21<sup>st</sup> century – A competency and knowledge approach* (pp. 221-240). London; New York: Routledge.

## 焦語摘錄七 · ICT and Boys

Boys seem to have a natural affinity with computers. It is often hard to tear them away from the screen. With Information Communication Technology (ICT) rapidly becoming a pillar of modern education, it is natural to assume that computers can play an important role in helping underachieving boys raise their standards. Related to this, Haughton provides a number of 'hints' for ICT teaching.

### The do's and don'ts of ICT teaching

- DO use ICT to produce a graph to represent boys' progress. It can be a powerful tool to show them where they're at and where they need to go.
  - DO make sure there is whole school awareness of the broader issues of boys' underachievement and how ICT can help and what role it can play.
  - DO draft computer-literate support staff into the ICT suite, so they can be positive role models for boys and offer them instant help. If boys are stuck with their hands up for ages waiting for assistance, they will lose focus.
  - DON'T let your kit get out-of-date. Make sure you have the best hardware and software your school can afford. Boys will be turned off by equipment that is five years old.
  - DON'T use computers as a carrot even though they are a great motivator.
  - DO consider setting up an e-buddy scheme with another school. Boys are much more likely to pay attention to things like spelling and grammar if they know they are writing for an audience elsewhere.
- DON'T make assumptions that all boys are 'like this' and all girls 'like that'. Not all boys will be motivated by using ICT. There isn't a 'one size fits all' solution.
  - DON'T leave it too late. The earlier you introduce boys to ICT, the better. They are not nearly as self-conscious at a younger age.
  - DO look for ways of developing creativity and fun with ICT, such as producing Java applets. Boys respond best to tasks that are short and have an obvious point.

Extracted from:

Haughton, E. (19 November 2002). Hitting the right button. *The Guardian*.



## 雋語摘錄八 • Learning Objects

"Learning objects, learning object metadata and learning object repositories" are terms that have been central to many discussions, projects and funding priorities of both public and private educational organizations. On the basis of the benefits that these terms might suggest, government and industry are spending substantial amounts of money, giving rise to a veritable "educational object and standardization," movement in educational technology.

In plain language, **learning objects** refer to digital educational resources; metadata refers to their systematic description to facilitate searching and administration; and repositories represent online, searchable collections of these resources. Examples of initiatives underway include the Curriculum Online project being undertaken for schools in the UK at a cost of approximately \$500 million and the Australian Learning Federation, a project similar in emphasis with a \$30 million budget. Similar projects are also being currently in train in Canada (e.g. eduSource, 2003; SchoolNet, 2003), the US (e.g. HEAL, 2003; iLumina, 2003) and by regional and international consortia.

### What's a learning object, anyway?

An early definition of learning objects was provided by the IEEE Learning Technology Standards Committee as: "Any entity, digital or non-digital, which can be used, re-used and referenced during technology-supported learning" (IEEE, 2001). Such a definition implies that learning objects can include "multimedia content, instructional content, instructional software and software tools [and] in a wider sense...learning objectives, persons, organizations or events" (IEEE, 2001).

### E-Learning Standards?

National and international organizations have been busy developing standards and specifications for e-learning technologies since at least the late 1990's. They have been doing so with the understanding that the benefits of this standardization work will be multifaceted:

*Not only would the development and use of international standards [in e-learning] produce a direct cost savings, but the information technology systems could be used in a wider range of applications and used more efficiently. Better, more efficient and interoperable systems, content and components will produce better learning, education and training – which has a positive effect upon all societies. (ISO, 2002)*

Organizations actively developing these standards and specifications include the IMS Global E-Learning Consortium, the IEEE Learning Technologies Standards Committee, and the ISO Subcommittee on "Information Technology for Learning Education and Training." The development of technical standards in e-learning can be understood as a part of the maturation of this emergent field. Before and especially since the popular emergence of the Internet and the World Wide Web, digital technologies have been used widely in education--both in distance and classroom education as well as off-line and online training settings.

Just as the protocols and standards ensuring interoperation on the Web (e.g. http or HTML) can support many kinds of documents and types of information, e-learning standards and specifications are expected to be able to support multiple forms and practices of learning. Accordingly, they are frequently described as "pedagogically neutral" or "pedagogically agnostic".

One prominent specification effort that emphasizes this type of neutrality is the "SCORM" initiative (Shareable Courseware Object Reference Model): It describes itself as providing "a pedagogically neutral means for designers and implementers of instruction to aggregate learning resources for the purpose of delivering a desired learning experience" (ADL 2001). It seeks to accomplish this not by generating standards of its own, but by simplifying, combining and bringing into interrelation a number of existing specifications and standards. SCORM is being developed by the Advanced Distributed Learning initiative (ADL), an effort sponsored by the White House Office of Science and Technology Policy and the US Department of Defence. The SCORM framework or reference model is intended to make a key contribution to the ADL's mission, which is "to provide high quality instruction and decision aiding anytime, anywhere and tailored to each learner's needs" (ADL, 2001, p. 1-11).

Extracted from:

Friesen, N. (forthcoming). Objections to learning objects. In R. McGreal (ed.). *Learning objects and metadata*. London: Kogan.

ISO. (2002). Information technology: Learning by IT. *ISO Bulletin* Retrieved 9 October 2003, from <http://jtc1sc36.org/doc/36N0264.pdf>

ADL. (2001). Sharable content object reference model Version 1.2: *The SCORM Overview*. Retrieved 9 October 2003, from [http://www.adlnet.org/ADLDOCS/Documents/SCORM\\_1.2\\_Overview.pdf](http://www.adlnet.org/ADLDOCS/Documents/SCORM_1.2_Overview.pdf)

IEEE. (2001). IEEE learning technology standards committee (LTSC). *IEEE P1484.12 Learning Object Metadata Working Group, WG12*. Retrieved 9 October 2003, from [http://ltsc.ieee.org/wg12/s\\_p.html](http://ltsc.ieee.org/wg12/s_p.html)

## 雋語摘錄九 • Three Unworthy Visions of the IT Future

Below are three visions of IT futurists:

### Desperate Futurists

Their hope: "Save money – reduce rising costs. Invest in 'pure' distance education and other educational uses of information technology to expand the school's market for courses while lowering cost-per-student. Use technology to increase the student-faculty ratio while maintaining educational quality."

These futurists are responding to the greatly increasing financial and competitive pressures on many educational institutions by grasping at an unrealistic hope of cutting overall costs with technology. However, uses of technology are increasing profitability (or decreasing losses) significantly only in a few educational niches – those that have at least one of the following characteristics:

1. New applications of technology and new media can be used to offer instruction very efficiently; usually, for "instrumental education" – focused on very specific, easy to describe, knowledge and skills. (E.g. training for information technology maintenance).
2. The learners are highly motivated and self-disciplined -- usually older students whose job progress depends directly on their learning. (E.g. company-required and subsidized training.)
3. The skills and certification are so valuable in the current and foreseeable job market that tuition and fees can be raised much higher than for other kinds of learning. (E.g. executive MBA programs).

Of course, there is always hope that new applications of technology or new ways of integrating it into educational practice may bring cost savings or additional revenue opportunities. Such results are

well worth pursuing, but they do not often arrive easily, predictably or without competition. Most technology-based financial gains for traditional educational institutions are more incremental and usually the result of persistent efforts and the accumulation of small changes. Or the result of bold operational transformations that usually require several years to plan and fully implement (e.g. new integrated student and business information systems).

### Mechanistic Mercantilistic Futurists

Their advice: "They aren't students, they're customers. All they want is to master the minimum necessary to get the certificate. Don't teach them anything you can't explicitly describe in advance and for which you can't confidently measure their mastery. The best instruction is finely tuned, professionally shaped and independent of the personal quirks of any teacher. Don't waste the time of the learners and teachers with unnecessary communication."

These cynics ignore the vast majority of human behavior – in schools, colleges and "real life." Watch how most people learn. Watch what most people seek in order to learn something really new to them that requires more than the mastery of a few closely related skills or facts. Notice how much most people need an external schedule and human guidance to maintain a regimen of learning activities.

Why do we expect teachers to get angry at students who do not do the "assignments" or who do not ask for help or clarification when they don't think they can do an "assignment"? In what kinds of businesses is it considered desirable for employees to get visibly angry at customers? Why do we think the student is obligated to do work "assigned" by a teacher? If the learner were only a customer or client, it would simply be the learner's choice.

Except when doing truly independent learning (self-help books, using other materials designed for independent mastery of specific skills, etc.) most learners seek a RELATIONSHIP in which someone provides a structure, schedule and access to materials – preferably in an environment where fellow-learners can encourage each other's efforts, help each other cope with the challenges and commiserate about the shortcomings of the situation. Most learners WANT the teacher to feel personally committed to the success of the students. Many learners want (or, at least need) the pressure of concerned teachers and fellow learners to keep them going.

Education is not an industry. But there is an industry supporting education. Most schools, colleges and universities must operate in a business-like manner for some purposes, but not for all.

### **Impatient Myopic Futurists**

Their hype: "Get rid of your campuses, distance education is the answer. Everyone is getting wired. All we need is one superb teacher for each major course."

These futurists are "myopic" because they fail to see the growth in demand for traditional forms of leader-directed, group participation, classroom- and campus-based education. [Note that "leader directed" is not synonymous with "teacher-centered".] These futurists also ignore the slow pace with which most new technologies can be used to change the core functions of an enterprise. These tend to be the same simplistic thinkers who ignore what happened with "educational television" from the 1950s and 1960s.

The expectations and fears back then were just as bizarre and inaccurate as some of the zealots' claims today, and based on the same kind of reductionist analysis. Because new technology (TV) could provide a pretty good reproduction of the visual image and sound of a person delivering a lecture, they believed the televised availability of the one best lecturer would eliminate the need for all other teachers of the same subject and for all "live" meetings. What really happened? Televised instruction didn't replace the vast majority of education. New forms of usage of that media SLOWLY emerged (and some are still emerging) for enhancing many kinds of education, replacing some, and offering some that weren't even conceived before.

Extracted from:

Gilbert, S. (2000). A new vision worth working toward: Connected education and collaborative change. Retrieved 9 October, 2003, from <http://www.tltgroup.org/gilbert/>.

雋語摘錄十 • How IT Literate Are You? A Skills Audit

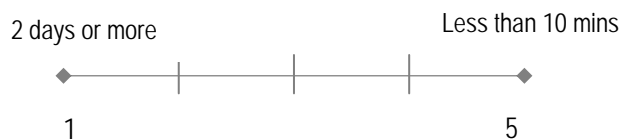
Q.1. How often do I use digital media to communicate with teachers or students?



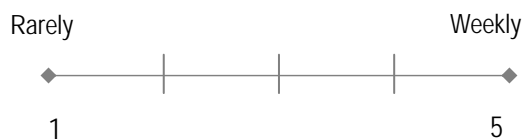
Q.2. The time it would take me to find and print a comparative list of the caffeine content of common drinks from a reputable site on the internet?



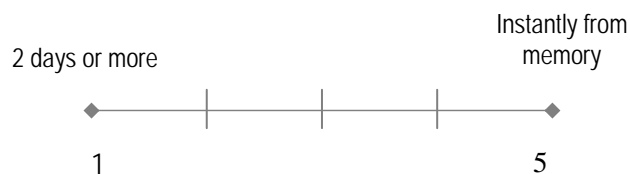
Q.3. How long would it be before I noticed that the school's server was down?



Q.4. How often I engage in an online forum or discussion group with other educators or administrators?



Q.5. How long would it take me to find the TCP/IP address of the school's server?



Q.6. How well could I describe the use of a "learning object, learning object metadata and learning object repositories" to parents.



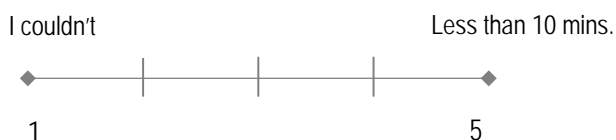
Q.7. How often do I manipulate data or extract reports from student records?



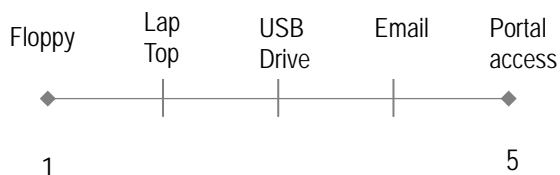
Q.8. If I wanted a report on the number of times a student has misbehaved during a term how long would it take me to get it?



Q.9. How long would it take me to print off a current financial statement if the Secretary was away?



Q.10. When you take work home, do you use:



Q.11. How long would it take me to find out what percentage of the schools computers need to be replaced within the next 2 years?



There are no right or wrong answers to this skills audit. The level of IT proficiency will vary depending upon your school's situation. However, as a general rule, scores at 44 and above would indicate effective ICT literacy.

## 雋語摘錄十一 • Technology and Behaviour Management – Identifying Strategic Intents

The International Society for Technology in Education (ISTE) once states:

*'Ready or not...  
The world is different...  
Kids are different...  
Learning is different...  
And teaching must be different, too.'*

New and emerging technologies have imposed implications on school leadership and behaviour management. School leaders are urged to consider the following four strategic intents which are required to develop their strategic technology and behaviour programs:

### 1. Understanding New Environments

This intent asks school leaders to enter the new and different worlds in which children are immersed. Students in school today have been immersed in a technological world substantially different from that of those born more than a decade or so ago. Experts state that students are likely to find existing schooling irrelevant and suggest strongly that schools need to audit student competence and to capitalize on the educational potential of young students by providing them with a networked learning environment that enables them to acquire an education befitting the Information Age. Other experts have also alerted us to the growing gap between children's experience of computers in their two environments of home and school. More importantly, understanding our children's new environment requires a courageous search for truth, involving schools being honest, both within and outside their organizations.

### 2. Creating New Environments

Experts indicate that school organizations still follow the Industrial Age model in which 'real learning' is seen to take place only within the walls of the school and students move in a rigid learning process. In proposing the way forward, experts suggest that we need to create schools which can thrive in a networked society. The

strategic intent of schools should be to use the new and emerging technologies to provide effective learning environments which are flexible, interactive and involve students in rich, meaningful tasks. Such environments can enable students to learn beyond the basics and traditional pedagogic benchmarks.

### 3. Identifying the Importance of Teachers

It is crucial to identify the role played by teachers and students in order to enable student potential to be translated into reality in schools. It has now been well established that the effective integration of computers in learning environments is dependent upon teachers changing from their traditional role of teacher as knowledge provider to teacher as learner and mediator of computer-assisted learning. Experts have discovered that children interacting with adults trained to mediate in a computer environment scored significantly higher than other children on measures of 'abstract thinking, planning and visual-motor coordination.'

### 4. Technology-related Needs

This final intent builds on the first three by suggesting the new organization and relationships which technology enables and indeed, demands. What is now demanded by students is a collegial, collaborative and rich learning environment. The move from a traditional classroom environment where children sit in rows, to new learning environments, presents challenges, difficulties and needs which have to be addressed and require support. School leaders thus need to identify technology-related needs and try to generate strategies so that such needs can be met.

Extracted from:

Finger, G. (2002). Technology and behaviour management: Identifying strategic intents – Understating and creating new environments. In B. Roger (ed.). *Teacher leadership and behaviour management* (pp. 128-140). London: Sage.

## 焦點摘錄十二 • Self Assessment Tool

### Self-Assessment Tool for School Leaders: Technology and Transformation

The following questions are intended to guide you through a self-assessment of your school's plan for technology and to assist you in determining some directions for integrating technology into your vision of learning. They are based in part on the Guiding Questions for Technology Planning, Version 1.0, created by the North Central Regional Technology in Education Consortium.

	Fully	For the most part	Somewhat	Not at all
<b>Technology and Our Vision of Learning</b>				
<b>To what extent:</b>				
1. Have we clearly articulated a vision of learning for our school that incorporates key precepts of education reform?	_____	_____	_____	_____
2. Does our vision of learning emphasize projects and the solution of real-world problems?	_____	_____	_____	_____
3. Does our vision of learning incorporate technology as a key component that can promote a challenging curriculum and instructional practices that engage students (e.g. collaborative learning, problem-based learning and project-based learning)?	_____	_____	_____	_____
4. Do our teachers, leaders and other key staff understand their unique roles in this vision of learning and agree that technology needs to continue to be developed as a key tool to change instruction and learning?	_____	_____	_____	_____
5. Does our vision of learning attend to the needs of students considered "disadvantaged" because of their socioeconomic status or other variables that may place them at risk of school failure?	_____	_____	_____	_____
6. Does our vision of learning promote equity as we consider new uses of technology (e.g. programs to take laptops home and contracts with parents to use school equipment in return for classes)?	_____	_____	_____	_____
<b>Technology and Professional Development</b>				
<b>To what extent:</b>				
1. Have we developed a professional development plan that addresses the skills teachers will need to integrate technology into the curriculum?	_____	_____	_____	_____
2. Have we budgeted sufficient funds for professional development and support for teachers and instructional staff that will increase both their knowledge base about technology and their understanding of engaged, authentic learning?	_____	_____	_____	_____
3. Have we projected monies for professional development and technological support for school staff over a sufficient time period (e.g. five years)?	_____	_____	_____	_____
4. Do our SMC and community members understand and support our professional development plan and its budget?	_____	_____	_____	_____
5. Have our teachers, leaders and other staff had input into determining the type, content and length of professional development necessary to integrate technology throughout their instruction?	_____	_____	_____	_____
6. Does our professional development plan address how technology can accelerate and enhance learning for special needs students (e.g. economically disadvantaged)?	_____	_____	_____	_____



	Fully	For the most part	Somewhat	Not at all
<b><i>Technology and Equity</i></b>				
<b>To what extent:</b>				
1. Do our plans for technology ensure that computers will be placed in a combination of classrooms and computer labs to ensure equitable access for all students in all content areas?	_____	_____	_____	_____
2. Have we changed our methods of instruction to ensure that students who typically experience less challenging content and remediation can use technology to engage with challenging ideas and the solution of real-world, relevant problems?	_____	_____	_____	_____
3. Have our staff, SMC and community members discussed and planned for school-initiated ways in which computers can be used at home on a contractual basis with the school or district?	_____	_____	_____	_____
4. Have we involved parents and family members in discussions of computer technology, ways in which they can help their children at home and also learn important skills?	_____	_____	_____	_____
5. Do we monitor our instruction to ensure that one group or gender does not dominate access to computers?	_____	_____	_____	_____

***Technology and Resources***

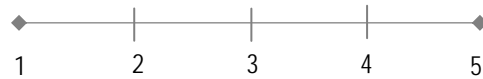
<b>To what extent:</b>	<b>To what extent:</b>			
	Fully	For the most part	Somewhat	Not at all
1. Have we researched not only the amount of resources necessary to implement technology into our vision of learning, but also made plans to ensure we can acquire those resources?	_____	_____	_____	_____
2. Does our budget for technology include adequate personnel to support teachers as they acquire the necessary knowledge to integrate technology throughout their instruction?	_____	_____	_____	_____
3. Have we ensured that teachers will not be forced to compete for scarce resources both for hardware and software, but also for ongoing repairs, maintenance and computer upgrades?	_____	_____	_____	_____
4. Do our budget plans include incentives for teachers who seek out and acquire additional resources in the forms of grants or other monies to support the infusion of technology in their instruction?	_____	_____	_____	_____

我們建議你使用這裏提供的「工具」，作為一般全方位回饋問卷調查的一部份，以便向員工、家長或其他人士收集與你個人學習需要相關的資料。請先閱讀一些雋語摘錄，再使用這項工具。

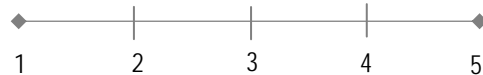
請按這個評量等級，為下列各題評分。

十分不同意	不同意	部份同意	同意	十分同意
1	2	3	4	5

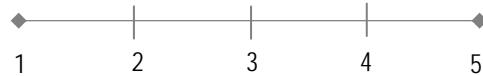
第 1 題 我對資訊科技有豐富的知識。



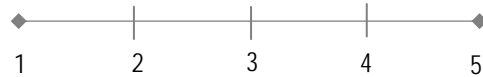
第 2 題 我展示與資訊科技相關的  
嶄新信念。



第 3 題 我對資訊科技的課程及教學法  
有豐富的認識。



第 4 題 在資訊科技方面，我展現了  
高效的領導才能。



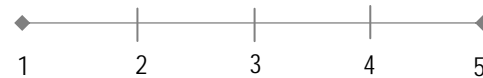
第 5 題 我願意在資訊科技方面投放  
資源。



第 6 題 我有效運用資訊科技。



第 7 題 我對使用行政資訊科技有  
豐富認識。



總分：

## 總結

我們希望你喜愛這本小冊子，並希望這小冊子帶給你來自認知衝突的一些張力。

小冊子中的雋語摘錄未臻完備；其中並未涵蓋所有在職校長需要認識的資訊科技與電子學習課題。

這些摘錄只是一個起點，希望觸發你思考各種有關資訊科技與電子學習的問題。我們希望這些摘錄已催動你對領導才能的求知慾，由此思考你認為應該知道的資訊科技與電子學習事項。我們也希望這些雋語所表達的意念，可促使你開展個人專業發展需要的敏覺易位反思。

至此，你已經完成你的雋語學習日誌圖表，並設定了一些學習目標。如你仍沒有把這些學習目標記錄在「在職校長專業發展需要分析工作簿」上，你應立即把最重要的目標騰錄至你的「領袖學習日誌」中。

		核心範疇					
		策略性導向及政策環境	教、學及課程	領袖、教師成長及發展	員工及資源管理	質素保證及問責	對外溝通及聯繫
資訊科技與電子學習： 雋語編號	1.	✓					
	2.		✓				
	3.			✓			
	4.				✓		✓
	5.		✓				
	6.			✓	✓		
	7.			✓		✓	✓
	8.	✓	✓				
	9.	✓				✓	
	10.	✓				✓	
	11.		✓	✓			
	12.	✓				✓	