e-Learning : The Challenges and Opportunities for Libraries

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Outlines

- **What is e-learning: An overview**
- **E-portfolio (電子學習檔案)**
- **Digital Libraries/E-Learning Interactions**
- **Strategic Issues for Libraries (策略議題)**
- **Pursing a Vision (未來展望)**

The e-learning era

- The world is changing ... A new world
- New learning and teaching behaviors
- A new context for systems and services
- As we entered the late 1990s (about 1997), the e-learning era began.
- E-learning is playing an increasingly significant role in our professional lives, either as a medium through which we learn, or as an activity that our library services must support.
  對圖書館專業領域的學習，或作為支持圖書館服務活動，將扮演越來越重要的角色。

Information Landscape and the Learning Environment

- Information becomes knowledge when those who need it, can locate and use it for the benefit of their teaching, learning and research
- Full text digital resources can be linked directly to online learning
- Library shares responsibility for preparing students to be information literate in a digital world

E-Learning: What is and what not

E-learning :
any kind of learning supported by information and communication technology (ICT) or e-media
任何一種透過資訊和通訊技術或e媒介所支持的學習活動。

- "E-learning cuts travel expenses, reduces the time it takes to train people, and eliminates or significantly reduces the need for a classroom/ instructor infrastructure."
- "E-learning is not E-training. It is information, communication, collaboration and training." (Kelly)

How do people see e-learning

- 與教師進行視訊會議(Video conferencing with a lecturer) ?
- 虛擬的學習環境(Virtual learning environment /managed learning environment) ?
- 網站(Web site)
- 網頁的取用(Web access)
- 線上評量(On-line assessment)?
- 虛擬教室-學生社群(Virtual class-community of students)

Sue Wilkinson, "*re*:source"
http://www.elearninggroup.org.uk/keynotes/elearning%20presentation%20Wilkinson.ppt (2005/05/05)

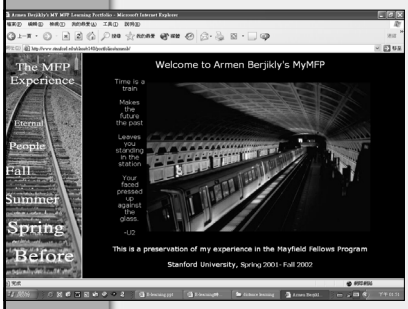
What do we know so far?

- E-learning is growing rapidly
- Infrastructures are in place to reach many people in many places – but not all許多地方已有基礎建設，但並非全部
- No significant difference – is found between offline and online classes in learning outcomes
- Offline does not seamlessly translate to online instruction
- Instruction is not all there is to e-learning
- Face-to-face is not the only mode of learning
- E-learning a complex phenomenon with social, technical, economic, administrative, managerial, and political considerations and consequences
- 是社會、技術、經濟、行政、管理和政治考量與結果下的複雜現象。

Report from an OCLC sponsored Task Force Members Council, October 2004

- Most institutional stakeholders still function within their particular views of the world and no consistent pattern of partnership can yet be detected to sustain successful e-learning environments.大多數的機構典藏，未以世界為觀點和未能考量一致性的合作模式，導致仍未建置出成功的e-learning發展環境。
- Almost invariably there is no common view of the e-learning infrastructure and its associated problems or issues.有關e-learning的基礎設施和其所伴隨的議題未有共識。

個人學習檔案
（Learning Portfolio）



- 具體學習經驗的認知（Recognition of a concrete learning experience）
- 經驗的觀察與省思（Observations and reflections of the experience）
- 學習成果的展示
  （The development of ideas/concepts as a result of the experience ）

Web Portfolio - MFP

Let's define…Portfolios

- Collection of materials or artifacts
  - Designed for a specific objective
  - Focus on Mastery
    - Skills
    - Attitudes
    - Knowledge
  - Includes reflection
  - Evaluation
- Provides evidence
  - Effort
  - Accomplishments
  - Progress

Let's define….e-portfolios

- What's in a name
  - Digital portfolio
  - Electronic portfolio
  - web-folio
  - e-folio
- Collection of materials presented in an electronic format
  - Web
  - CD ROM
  - Portable Hard Drive

Why?

- Fosters active learning 促進主動學習
  - ownership and control of learning
- Motivates students
- Feedback
- Discussion of student performance
- Benchmarks 建立基準
- Accessible可及性
- Store multiple media
- Easy to upgrade
- Cross-reference of student work
  - interdisciplinary

Advantages

- Learner Centered
- Outcomes Centered
- Integrates
  - Curriculum
  - Instruction
  - Assessment
- Accessible
- Easy to Update

What should be in there…

- Table of contents/Directory目次/目錄
  - Themes/Categories
- Goals and Objectives目標和宗旨
- Benchmarks基準
- Summary of Completed Courses/Activities課程/活動的摘要說明
- Planning guide課程計畫指南
- Current status of "Learning Plan" 學習計畫
- Writing sample 作業範例
- Transcripts 成績報告單
- Evaluations 評估
  - Faculty
  - Employer
  - Self-evaluations
- Student Reflection

Creating e-portfolios

- **Text 文字**
  - Word processor
  - Spreadsheets
  - Database
  - Adobe Acrobat - PDF
- **Graphics圖像**
  - Imaging Software
    - Photoshop/Image Ready
    - Fireworks
  - Graphs/charts
  - Diagrams
- **Audio 聲音**
  - Mp3
  - WMA (Windows Media Audio)
  - Aif
- **Video 影像**
  - avi
  - mov
  - RealOne
  - Windows Media Player
- **Models**
  - 2 Dimensional
  - 3 Dimensional
- **Animations/ Simulations 動畫**
  - Flash
- **Web pages/Web sites網頁**
  - Html, XHTML, etc
  - Dreamweaver
  - FrontPage
  - Web interface or CMS

Net Generation information environments

- Provide individual and group learning spaces
- Support access to and creation of information resources
- Offer staff and faculty development and training
- Provide staff with a range of technology and information skills
- Effectively market services to all groups of potential users
- Integrate physical spaces and services with virtual spaces and services
- Build community

Joan K. Lippincott , "Net Generation Students and Libraries ," in Educating the Net Generation. (EDUCAUSE, 2005) http://www.educause.edu/NetGenerationStudentsandLibraries/6067 (2005/05/05)

Net Generation information services

- Use students on teams that design new services and environments
- Integrate services into course management systems
- Explore services for mobile devices
- Represent services and instruction visually and in multimedia modes
- Focus on partnership models
- Emphasize how to evaluate information resources
- Emphasize information policy issues

Joan K. Lippincott , "Net Generation Students and Libraries ,"
in Educating the Net Generation. (EDUCAUSE, 2005)
http://www.educause.edu/NetGenerationStudentsandLibraries/6067 (2005/08/23)

Net Gen access services

- Continue to integrate library information into Google or other popular access mechanisms
- Offer simplified and graphic ways for students to approach subject searches
- Integrate subject guides or pathfinders into CMS or other locations conducive to use
- Integrate searching of "open" Web resources and materials owned or licensed by the library

Joan K. Lippincott , "Net Generation Students and Libraries ,"
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A question for libraries

- Courseware environments provide a logical place for information and knowledge to be created, accessed and used. Students find that CMSs meet many of their information needs and tend to use them as a kind of primary gateway.
- Typically, libraries are left our of the decision-making and implementation processes.

Lorcan Dempsey
VP of Research for OCLC

- Libraries need to reposition themselves to be viewed by the academic community that they serve as managers and overseers of the repository space.
- Preservation and reusability of learning content are essential requirements in repository management, yet libraries were rarely involved in meeting this management challenge.

Digital Library and the Learning Environment

- Ability to identify, access, evaluate, organise and communicate information and knowledge (information literacy) is a core capability for the knowledge society
- Library shares responsibility for preparing students to be information literate in a digital world

Roles of libraries角色

- Repository management 典藏管理
- Life-cycle support for learning objects
  支援學習物件的生命週期
- Research skills 研究技能
- Link library services to learning management systems圖書館服務與學習管理系統的整合

Strategic Issues for Libraries
圖書館與數位學習的重要議題

- How can libraries bridge the gap between their own services and systems and those of the e-learning environment?
  圖書館如何築起服務與課程管理系統和數位學習間的橋樑？
- What traditional services and what new services are needed?
- 哪些圖書館傳統或新興的服務適用於數位學習環境？
- Which library services need to be redefined to address the needs of the new e-learning environments?
  哪些圖書館服務在數位學習環境中需被重新定義？
  (OCLC Taskforce)

Strategic Issues for Libraries (Cont.)

- How can learning objects and their associated repositories be defined and what role do libraries play in developing a new model?
  學習物件、知識倉儲應如何被定義，圖書館的角色扮演為何？
- What are libraries best strategies for engaging with institutional e-learning strategies?
  圖書館如何參與數位學習策略之制訂？
- How can the library become a viable and productive community player in the developing e-learning landscape?
  在數位學習的版圖裡，圖書館如何扮演產製社群的角色？
- *(OCLC Taskforce)*

數位學習帶給圖書館的契機

- 許多企業機構、社會組織大力投資數位學習
- 圖書館可以利用數位學習訓練並提升館員專業能力
- 圖書館將更熟悉數位科技的發展，如OAI、Open Source、數位典藏管理等議題。
- 在數位學習環境中，設計不同層次之資訊素養課程
- 提升圖書館在數位環境中的能見度。

Joan K. Lippincott, "Net Generation Students and Libraries ," in Educating the Net Generation. (EDUCAUSE,2005) http://www.educause.edu/NetGenerationStudentsandLibraries/6067 (2005/05/05)

合作的契機：整合式的圖書館服務
（Collaborative opportunities-integrating library services）

- 持續的整合各種資訊窗口，作為學習活動的一環
- 在各種學習環境下，加速資源的發現、存取與轉換
- 結合廠商提供資訊服務 Integrate third party commercial information services
- 提供客製化的的個人入口網站，掌握讀者興趣Customize portal facilities for sharing personal preferences
- 在需要時，提供便捷的數位化參考服務
  Provide easy access to virtual reference services at the point of need
- 協助資訊尋求的訓練Embed training modules to assist in information seeking

OCLC, "E-learning and libraries: a new white paper, "(2003) http://www5.oclc.org/downloads/community/elearning.pdf

Strategic Priorities優先次序策略

- Reconceptualize the positioning of library services in the e-learning infrastructure
- Develop low risk library systems interfaces with e-learning infrastructure
- Adopt a clear strategic position on repository management issues

Neil McLean "Bridging Gaps between Information and Learning Environments", 2004

Digital Library role
數位圖書館的角色

- Skills of managing external information (cataloguing, classification)
- Transferable to managing internal information (metadata, taxonomies)
- Librarians work with IT staff and educational designers to embed these skills into:
  - online courseware
  - intranet design
  - web refurbishment
  - portal development

Challenges for e-learning: content

- Developing learning materials in-house of buying content?
- E-book technology needs some improvement
- Licensing problems
- Copyrights-problems
- How to index information?
- How to make effective use of content: problem of reusability
- The problem of preselected or overpackaged courses

Challenges for libraries
圖書館的新挑戰

- a demand of diverse educational opportunities (study landscape)滿足學習需求
- an increase in the number of unique environments擴大學習場域
- need for library resources and services at locations other than main campuses or at distance learning sites/home
- demand for equitable services for all students in higher education
- 提供高等教育學生平等服務
- technological innovations in the transmittal of information and the delivery of courses.資訊傳播與課程傳遞過程中的科技革新
- the appearance and rapid development of the virtual or all-electronic university數位化網路大學的蓬勃發展
- what if the students never more set foot in the library?
- 學生如果不再踏入圖書館？...

Vlir-Workshop: Distant Learning - 17/02/03 - Chris Peeters/KdG

A library: added value to an electronic learning system: collection services(1)

Library is a content-rich organisation, but moves from a content owner to a content provider

- ✓ Publishers become librarians: academic libraries in competition with commercial (digital) information providers? E.g. Questia Media, Xanedu, Kluwer ...
- ✓ More information delivery directly from producer to end-user, without involvement of an information centre as intermediary?
- ✓ Preselected and packaged courses from commercial vendors (NetG, Smartforce...)

A library: added value to an electronic learning system: collection services (2)

- ✓ users become librarians: academic libraries in competition with other educational stakeholders within the institution?

  library has the primary responsability of content produced within the scholarly community (syllabi, readings, electronic courses...)

- ✓ archiving electronic documents, courses, commercial course packs:

  OAI-repositories for learning materials

  Linking Content Management Systems to Library catalogues

How to cope with the commercial e-libraries or content providers?

如何應對商業性數位圖書館或內容供應商？

- Find out how competitors work, their offerings and pricing
  發現競爭者所提供的服務和價格
- Survey users and assess quality of services
  使用者調查與服務質量評估
- Start by asking if patrons would "pay for it"徵詢使用者是否支付?
- Web sites can be improved (e.g., "my library" sites)網站的改善
- Librarians know the curriculum, courses and assignments
  館員必須知道所有課程計畫、課程和作業
- Exploit resources which are unique to the institution and can be produced within the institutions 發掘機構獨特的資源
- Best is to look for alliances with competitors最好尋求與競爭者聯盟合作
- Some competitor's resources may strengthen collections競爭者的資源可強化館藏
- Library has to take lead in creating alliances圖書館必須在聯盟中扮演領導地位
- Challenge for consortia聯盟所帶來的挑戰

A library: added value to an electronic learning system: Indexing services

圖書館在數位學習系統的加值服務：索引服務

- ✓ indexing of learning materials: harmonising library metadata-standards (OAI-standards) and e-learning metadata-standards (LOM, SCORM)
- ✓ promotion of interoperability between information systems
- ✓ information portals (http:africaeducation.org/adl)

IMS & CNI圖書館資訊服務與數位學習互通白皮書
Interoperability between Library Information Services and Learning Environments

White paper on behalf of the IMS Global Learning Consortium and the Coalition for Networked Information (CNI) on interoperability issues between library information environments and e-learning environments

written by Cliff Lynch and Neil McLean ,published in 2004

IMS and Digital Library Convergence Points

- Unique needs of e-learning community:數位學習社群的特殊需求
  - Content Sequencing
  - Discovery Meta-data
  - Digital Rights數位版權
- **Common needs of e-learning and library communities:數位學習和圖書館社群的共同需求**
  - Web Service based Query Mechanisms基於詢問機制的網路服務
  - Long-term Preservation長期的保存
  - Infrastructure Frameworks 基礎設施的架構
- **Example of content packaging strategies:內容封包策略的舉例**
  - Wrap one specification package with another
  - Translate one specification package into another
- **Remember: Internal data structure not same as transmission package structure內部的資料結構與傳輸封包的結構不一樣**

E-learning and "Library" Link
串聯圖書館與數位學習

- Resources can be found:
  - In learning content repositories
  - In eLibraries
  - In Library Catalogues
  - In national and other collections
  - In eAggregators
  - On the Web

Implications for libraries
對圖書館的意涵

- New responsibilities for digital assets
  對數位資產的新責任
- Exposing services 服務的可見度
- More responsive to needs對需求的更多回應
- New roles e.g. electronic copyright clearance
  新規範的建立，如電子版權管理
- Converge towards sector standards in handling meta-data
- Central vs. local resources集中 vs. 在地資源

Paul Bailey

Implications for staff/librarians
對圖書館員的意涵

- Collaboration between libraries, IT staff, learning technologists, academics, vendors, etc.

  建立在圖書館、IT職員、學習設計師、學院、代理商等之間的合作關係。
- Asset management資產管理
  - Copyright著作權
  - archiving of electronically provided courses

    利用電子檔案提供課程
  - promotion of the electronic repositories which are provided by the university推動由大學來提供電子典藏

Paul Bailey

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