Bridging the Information Literacy Gap: Understanding Information Behaviour and Developing an Evidenced-based Multimedia Courseware to Enhance Information Literacy in Hong Kong

Dr Shirley Chiu-wing Wong
University Librarian, The Hong Kong Polytechnic University

IATUL Workshop on Information Literacy
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Hong Kong

• Population: 7.26 M
• Four key industries: Financial Services, Tourism, Trading & Logistics, Professional Services (e.g. Legal, Accounting, Engineering, I.T.)
The Hong Kong Polytechnic University

- Students: 32,254 (PG: 10625)
- Staff: 4,812
- Alumni: 355,000
- 6 Faculties (with 25 academic units) & 2 Schools
- Taught programmes: 221
First large scale cross-institutional information literacy project in Hong Kong

<table>
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<tr>
<th>Project Title:</th>
<th>Enhancing information literacy in Hong Kong higher education through the development and implementation of shared interactive multimedia courseware</th>
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<td>Leading Institution:</td>
<td>The Hong Kong Polytechnic University</td>
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<td>Other Participating Institutions:</td>
<td>All 8 publicly funded higher education institutions in Hong Kong PolyU, CUHK, CityU, HKBU, HKIEd, HKUST, HKU, LU</td>
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<tr>
<td>Principal Investigator:</td>
<td>Dr Shirley Chiu-wing Wong, University Librarian, The Hong Kong Polytechnic University</td>
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Project Fund

mainly from the University Grant Council (UGC) Funding Scheme for Teaching and Learning Related Proposals

- **UGC's contribution**: 70%
- **Participating institutions' matching fund**: 30%
Project Team

• Members:
  – Library directors of all eight publicly funded higher education institutions in Hong Kong
  – Three faculty members, one each from the three largest institutions
  – Honorary Consultant: Prof Christine Bruce of Queensland University of Technology, Australia, author of The Seven Faces of Information Literacy
What is Information Literacy?

The ability to recognize when information is needed, to locate, evaluate, and use effectively the needed information:

- Determine the **extent** of information **needed**
- **Access** the needed information **effectively and efficiently**
- Evaluate information and its sources critically
- **Incorporate** selected information into one’s **knowledge base**
- Use information effectively to accomplish a specific purpose
- Understand the **economic, legal, and social** issues surrounding the use of information, and access and use information **ethically and legally** (Association of College & Research Libraries, 2000)
What is Information Literacy?

Experience of using information to learn via a reflection process enables the transfer of the learning process to new contexts, thus, facilitating student-centered inquiry-based pedagogies and lifelong learning (Bruce, 2008)
The need for information literacy enhancement in HK higher education

• University freshmen (Wong, 2011)
  – Very limited experience in information use for research tasks in school years
  – Weak in using scholarly information sources and search tools
  – Heavy reliance on quick web information for research tasks
  – Weak capability in evaluating information and acknowledging sources

  – Even PhD students start out ignorant of many important scholarly sources and need help to develop their information skills
The need to understand information behaviours among university students in Hong Kong

• Limited research conducted focusing on information literacy among university students in Hong Kong

• Large-scale comprehensive study needed to fully understand student information behaviours to assess local information literacy educational needs in Hong Kong
Inadequate information literacy embedment in HK higher education compared to countries worldwide

• International trend to integrate information literacy (IL) into university curricula
• Not a standard practice in Hong Kong yet
Key Deliverables of Project

• A knowledge base on the information behaviours of students
• An interactive multimedia IL courseware addressing the local IL educational needs
• An IL self-assessment tool
• Training for librarians in embedding IL into the university curricula
• Embedding IL into curricula with the “Course Enhancement Funds”
Project objectives

Bring about a paradigm shift to valuing information literacy among university management and faculty

Embed information literacy into university curricula

Enhance information literacy among students
Seven Project Phases

1. Student needs assessment & development of RRSA HK
2. Interactive multimedia courseware design
3. Evaluation & refinement of courseware
4. Implementation
5. Evaluation
6. Continuous updating & Ongoing training
7. Course Enhancement Funds

Capacity building programme
Phase 1

Assessment of IL educational needs & development of an IL self-assessment tool (RRSA-HK)
Qualitative need assessment on information behaviour

• Strong emphasis on local context, including:
  – Observations and process analysis of information tasks performed by students
  – Analysis on student inquiry projects to review information sources cited and format
  – In-depth interviews with students and faculty members

• Sample size = 96 students
• Tasks analysis will be screen captured
• Whole process audio-taped
### Where are we at now?

#### Task analysis with students

<table>
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<tr>
<th>Timeline</th>
<th>Description</th>
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<tr>
<td>Aug 2015</td>
<td>IL task analysis and courseware - divided into eight subject disciplines.</td>
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<tr>
<td>Sep 2015</td>
<td>PolyU designed the first draft of the information task, based on real-life problem scenario of business/economics.</td>
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<tr>
<td>Late-Sep 2015</td>
<td>PolyU arranged a pilot test of information task. After which the task will be further fine-tuned.</td>
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<td>Early Oct 2015</td>
<td>A training session for JULAC staff on how to conduct an effective interview will be provided. All JULAC Libraries will also receive the up-to-date information task and then customize it with their designated subjects.</td>
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<td>Oct -Nov 2015</td>
<td>Each JULAC Library will recruit 12 students (based on the assigned subject, various years of study) to complete the information task. IL project staff will work with each member on the first two interviews to ensure the data drawn is valid and consistent among others.</td>
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<td>Jan – Feb 2016</td>
<td>Data analysis.</td>
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Findings from qualitative need assessment used to form:

Knowledge base of local students’ specific IL educational needs

Inform

RRSA-HK development - customization of US-based RRSA with local context

Guide

Shared Interactive multimedia IL courseware development

Administer RRSA-HK to students as pre-intervention IL self-assessment
Phase 2
Design of a shared interactive multimedia IL courseware
Courseware development – subject division

Each institution would work on a subject specific module on top of the general introduction:

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<th>Institution</th>
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<tr>
<td>Arts/Humanities</td>
<td>Lingnan University</td>
</tr>
<tr>
<td>Business &amp; Economics</td>
<td>PolyU &amp; The German National Library of Economics</td>
</tr>
<tr>
<td>Education</td>
<td>Hong Kong Institute of Education</td>
</tr>
<tr>
<td>Engineering</td>
<td>The Hong Kong University of Science and Technology</td>
</tr>
<tr>
<td>Health Sciences</td>
<td>The University of Hong Kong</td>
</tr>
<tr>
<td>Law</td>
<td>City University of Hong Kong</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>The Chinese University of Hong Kong</td>
</tr>
<tr>
<td>Science</td>
<td>Hong Kong Baptist University</td>
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Design of a shared interactive multimedia courseware features

• Centralized IL learning platform shared among all 8 publicly funded institutions

• Contents aligned to learning needs identified in phase 1 & IL theoretical framework

• Authentic tasks that reflect real life situations

• Modular approach

• Readily embedded into Learning Contents Management Systems

• Interactive - e.g. decision tree simulation, games & animations, visual & audio effects to engage learners

• Online formative assessment activities & discussion forums
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Courseware development

Collaborative effort from:

– Project team
– Librarians of all 8 participating institutions in Hong Kong
– German National Library of Economics
– Open edX project team in Hong Kong
– Contract for service software designers
Phase 3

Evaluation and refinement of courseware and its elements
Evaluation and refinement of courseware

- Pilot run of courseware on selected teaching programmes before launch
- Conduct usability test with student feedback on:
  - Learnability
  - Efficiency
  - Memorability
  - Errors
  - Satisfaction
- Refinement based on above evaluations
Phase 4

Capacity building in enhancing IL
Capacity building programme for librarians

• Information Literacy assessment
• Research assignment design
• Building collaborative partnerships
Phase 5
Course enhancement funds for promoting partnerships between faculty and librarians
Course enhancement funds for promoting partnerships between faculty and librarians

- 40 course enhancement funds, HK$15,000 (1,935 US$) (1,730 EURO) each

- For teaching staff to work with librarians to
  - Develop new information literacy content
  - Modify existing research assignments and assessments

- Funding may be used to support hiring Teaching Associate or Instructional Assistant
Phase 6

Implementation of the courseware with an integrated and embedded approach
Implementation of the courseware with an integrated and embedded approach

- Faculty or subject librarians working closely with respective programme coordinators and individual teaching staff
- Certificate programme on the courseware through blended learning
- A half day symposium and seminars for university management and faculty members
- Meetings with university management, deans and department chairs
- Campus awareness campaigns
Phase 7

Evaluation of the outcomes and impacts of the project
Evaluation of the outcomes and impacts of the project

- RRSA-HK as post-intervention IL self-assessment to students
- Formative assessments built into the courseware modules
- Usability studies, including satisfaction level among faculty and students
- User surveys
- Usage analysis
References


Thank you