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Information literacy for the information literate: A model and case study from the Wuhan UNESCO training the trainers in information literacy program

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Abstract This article draws on the authors' experiences in providing training for information seekers worldwide, from elementary school children to business professionals. Designed for the UNESCO Training the Trainers (TTT) in Information Literacy (IL) workshop in Wuhan, China in October 2008, the material offers a practical, structured framework for creating an information literacy program for trainers that is adaptable to changing learner needs and changing Information and Communication Technology (ICT) tools. It includes examples and a case study using a basic course for paraprofessionals and beginning librarians. Based on input from participants at the Wuhan workshop, the article enhances the assessment portion of the presentation. The UNESCO program document listed a target audience of the less information literate ((UNESCO, 2008) Training the trainers in information literacy portal http://portal.unesco.org/ci/en/ev.php-URL_ID=25623&URL_DO=DO_TOPIC&URL_SECTION=201.html. Accessed 14.02.10). This paper, and in general the approach of the Wuhan session, focused on information literacy at an institutional rather than community level (Zhang, X. (Julia) (2009). Report of the UNESCO training-the-trainers in information literacy workshop, October 20–22, 2008, Wuhan, China. *International Information & Library Review*, 41(4) 273–276). © 2010 Elsevier Ltd. All rights reserved.

Introduction

The December 2009 issue of *The International Information & Library Review* (2009) presents an overview of all eleven of the UNESCO (UNESCO, 2008) Training-the-Trainer sessions held in the 2008–2009 timeframe, with Zhang (2009) describing the Wuhan session. At the workshop, Barbie Keiser presented “Strategies for Implementing

Successful IL Action Plans” which focused on strategic planning, introducing concepts such as SWOT, environmental scanning, needs assessment, competencies and course assessment (Keiser, 2008). The presentation by the present authors, Pagell and Munoo (2008), extracts key concepts from Keiser and offers a practical approach to planning and implementing a course.

UNESCO focuses on information literacy (IL) for the less information literate. The authors believe that it is equally important for the information workers, faculty, researchers, graduate students and professionals in a society to be information literate in order for a country to be competitive. Therefore, a framework is necessary

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for training the trainers of these learners. With the globalization of economies and education, information, research and knowledge searching skills are basic tools for any institution (Carayannis, Popescu, Sipp, & Stewart, 2006).

Within the library/information world, these information literacy programs have different names, such as orientation, training, bibliographic instruction or research skills. It is not the name but the context that is the message: going beyond Google; evaluation, critical thinking, analysis, transferability; relationship to copyright and plagiarism; and life long learning. For purposes of consistency, we will use IL as our terminology in this paper.

What a training program will look like is dependent on the needs of the learner, the institution and the local environment. New trainers will benefit from the structured approach we present.

Steps to designing and implementing an information literacy course

Once the trainer has followed recommendations by Keiser on strategic planning and high level assessment, the authors suggest following these seven steps before delivering the course. The steps build on each other and provide the trainer with a set of questions to answer before moving on.

1. Understand your learners and their literacy needs.
2. Set course objectives.
3. Prepare your course outline.
4. Determine teaching methods.
5. Create course materials.
6. Design assessment tools.
7. Plan the marketing for the course.

Understanding learners and their information needs

"Information literacy" not only differs from person to person but from organization to organization. Before planning a program, the coordinator or trainer should be able to answer the following questions.

- a. What is information literacy for your organization's trainers?
- b. What is information literacy for your learners?
- c. What do your learners already know and how can you find out?

If your learners are future trainers, information literacy can be based on the competencies that they need to perform their jobs successfully or on international standards such as UNESCO (Catts and Lau, 2008), national standards, such as the Association of College and Research Libraries (ACRL, 2000) or a local standard, such as Workforce Development Agency, Singapore (WDA, 2008).

For example, in the absence of a polytechnic or undergraduate degree course for library workers in Singapore, the Workforce Development Agency requested that the

local library association provide them with competencies and possible courses to fill the void (Table 1).

Tracking what users already know is a challenge but it is possible. For your own staff, you should already have documentation through resumes and performance. If you have a confirmed list of attendees for a course and enough lead time, you can ask them about their needs and perceived competencies before they attend the class.

In the Singapore Management University (SMU) setting, international degree students and international exchange students all receive compulsory orientation training. Trainers are creating a knowledge base of literacy proficiencies among countries of birth or education in order to refine our content based on results of surveys trainees fill in after class.

Starting in 2008, post-graduate students rated themselves on proficiency on basic library research skills. A lower percentage of students from mainland China rated themselves proficient or expert than those from Singapore or other countries (Fig. 1).

The majority of international exchange students are from Europe or North America. To better meet their needs and expectations, trainers are collecting data on their previous training experiences, if any. Responses differ among regions, countries and even universities within countries. For those countries with 20 or more students, Sweden, Netherlands and Canada led the list with 45% or more students having had some hands-on training while Korea, Switzerland and France had less than 10%. For newly-matriculating international students, less than 10% had attended library training. Of those who had attended a course, it had been the Li Ka Shing library class that is given to students in a pre-university program.

Set course objectives

Objectives serve as guiding principles in designing and delivering training programs. If objectives are not well articulated and clear, this may determine the success or failure of a program. Questions to ask include:

- a. Are the objectives in line with the learners' needs?
- b. What should the learners know at the end of the course?
- c. Are the objectives clear and specific?
- d. Are the objectives measurable?
- e. Can you map the content to the objectives?

Focus on what the learner needs and what the organization wants the learner to know. We often want to teach more than the learners can absorb. Therefore, be able to articulate learning outcomes and key takeaways and keep them in sight during course preparation and presentation.

From objectives to course outline

Once the trainer determines the objectives and outcomes, it is time to create a course outline. Before setting the course outline, you also need to know:

- a. How much time do you need?

Table 1 Information literacy for library staff – mapping learning to competencies.

	Competency group	Basic skills and knowledge
1.	Answer basic enquiries about organization's collection, services, use, facilities and procedures	Read, write, speak, listen at level proficient for organization's user groups
2.	Search catalog and other basic finding tools	Use computer and internet; understand bibliographic and database records
3.	Refer to other people, organizations	Know when to use OPAC, database, internet, referral and why
4.	Provide appropriate response, follow-up and closure to users	Know how to use common databases

From: Singapore Workforce Development Agency planning exercise, 2008.

- b. How much time will you get?
- c. What are the skill dependencies?
- d. Who else should you include in planning?

Courses can fail even before they are planned because of disconnects between time needed and time provided, the trainer's ambitions and the learners' skills. Successful classes also benefit from consulting other people in your planning. It can be the learners' bosses, colleagues or someone from the organization's administration. For example, in planning courses for students, you may want to check with the registrar or a program administrator to find a good time to offer your course, or check with colleagues on their experiences.

In preparing the outline, design the content in chunks or modules. Over ten years ago, one of the authors co-prepared a long course on Business Information sponsored by the Open Society and Soros Foundation. Learners worldwide, with varying levels of sophistication, have been trained on some of the modules, because the pieces are so easily movable and modifiable.

Select a teaching method and the trainer

By now, we should be aware that our students have different learning styles. That means that we should align the content to the learners. Different content lends itself to different teaching methods and that means we should

align the teaching methods to the content. Finally, we have to factor in the abilities of the trainer.

- a. What teaching method(s) is most appropriate for the content?
- b. How can you present the content to reach learners with different styles?
- c. What competencies and skills does your trainer need?
- d. What is more important – being a good trainer or a domain expert?
- e. What is more effective – using an internal trainer or outsourcing training?

In any class, expect the learners to have different styles and try using a variety of teaching methods (Table 2).

One value of the training-the-trainer sessions is that they factor in the often overlooked element – the competencies and skills of the trainers themselves. Because information literacy is considered a core skill in many university settings, proven training and teaching skills are required of new staff when they are hired. In high end business settings or in small communities, these skills are a luxury. In reality, the trainer's ability and style is also a factor in the teaching method.

"The core skills for trainers are probably the same – to have a solid knowledge base in the topics you are training on, to be able to communicate things well, in a range of ways, and to understand the learners' characteristics and drivers. Along with this, trainers need to be alert to the possibilities of new strategies, and we may need to learn

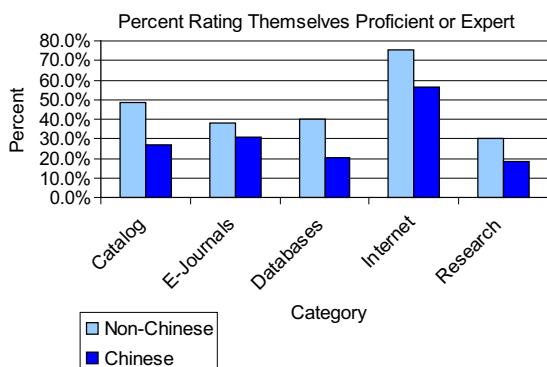


Figure 1 Percent of post-graduate students rating themselves proficient or expert on basic library skills. From SurveyMonkey results of post-graduate student intake for 2009–2010.

Table 2 Commonly used teaching methods.

Method	Characteristics
• Lecture	Passive
• Show and tell	Individual learning in a large group setting
• Discussion	Interactive
• Hands-on	Large or small-group setting
• Role play	Interactive
• Group discussion	Individual or group
• Virtual	Small-group setting
	Asynchronous
	Individual

new skills to do so. So if podcasts seem like an appropriate tool to use, we need to learn what makes a good podcast. And we need to keep the good sense to know when a given method is not appropriate.” (Martin, 2009, p. 4).

For as long as librarians have been providing “bibliographic instruction”, how much subject content the instructor needs to have has been a controversial issue. For training the information literate, knowledge of subject content has become more important. In many other settings, being a good trainer and presenter is more important. While knowledge is important, the domain expert may not be appropriate for introductory hands-on IL training since the expert may not be able to relate to the new learner.

In settings where skilled course designers and trainers are not available, should the organization use outsiders? There is no right answer.

Johnson (2004) presents a list of questions to consider when determining whether to develop courses in-house or hire outside consultants or instructors to deliver the courses.

- What are the capabilities of your trainers? Can you grow them? Do they have the knowledge and passion for literacy training? If the answer is yes, then they can be trained to present a TTT course.
- Does the staff have the capacity to take on the responsibility? This includes the time and the ability to be in the geographic location where training is required.
- Does the organization value training enough to invest in creating trainers?
- Does the content change rapidly and can the internal trainer keep up to date?
- Does the organization’s culture view outsourced trainers as experts or intruders who do not know the culture?
- Is a combination the solution? In some ways, the TTT program provides this alternative, having experts train the internal trainers and be available to offer ongoing advice.

Create course materials

Some trainers make the mistake of creating course materials too early in the process. In this process, creating the course materials comes after strategic planning, needs assessment, objectives setting, developing a course outline and determining teaching methods so that the pieces fit together. After determining the most appropriate teaching methods, it is then necessary to determine the most appropriate methods to disseminate the materials.

Course materials refer to what the trainer will be teaching from and what the learner gets as preparation and takeaway. The most common visual is PowerPoint. “Death by PowerPoint” is a common theme of web records. Hogan (2009) suggests that the use of PowerPoint infers a one-way flow of information from trainer to learner. Trainers still use PowerPoint, often as much for themselves as for the learners. Having PowerPoint is better than relying on

written notes. When using PowerPoint, ensure that slides are readable both on the screen and in a handout. Often even 3-to-a-page handouts reduce examples to a size too small to read. Seeing the details on the screen is also a problem for learners in show and tell settings.

Learners still like paper takeaways; some trainers are concerned about the environmental impact of too much paper. In countries where internet access is neither pervasive nor stable, trainers need to remember the importance of the traditional course materials. Learners also like web-based materials to refer to after the class so we recommend both methods. Common examples include are shown in Table 3.

Table 3 Examples of traditional course materials.

PRINT	WEB	MEDIA
Hand – outs	Research guides	Podcast
Readings	Readings	Video
Activity sheets	Activity sheets	

If you provide print materials, web-based readings or screen captures, consider the copyright laws in the country in which you are training and the database and publisher licensing agreements. If learners need to access commercial databases, then the trainer may have to contact the vendor to open up access rights.

Design assessment tools

Consider three aspects of assessment; - the learners, the course and the trainer. Feedback on each aspect is part of the course design.

- a. How will you determine that learning has taken place?
- b. How will you assess the course?
- c. How will you assess the trainer?

Trainers who have competencies in designing, developing and delivering IL programs may lack assessment knowledge and skills. They tend to focus on giving a survey at the end of the class. Ways to gather immediate feedback include formative and summative techniques. Formative assessment takes place during the training session. It includes questioning the learners and giving them immediate feedback. Summative assessment includes the print and online surveys. The authors recommend a combination of these two approaches.

These techniques do not measure the long term impact on the learner nor provide the organization with actionable information for course improvement. Measuring long term impact depends on the situation and how close the trainer is to the learner and the learner’s organization. For example at SMU, library training sessions are part of the course on Academic Writing, offered with the Center for English Communication. For summative assessment, students complete a worksheet where they develop a research problem statement, formulate search strategies and identify suitable resources. Faculty may give bonus points based on completed worksheets. Throughout the

semester, librarians work with students and the faculty to provide research consultations to re-enforce the in-class training. One measure of success is the repeat request for the library to conduct this training.

A recommended article that explains these techniques is Oakleaf's (2009) "The information literacy instruction assessment cycle". The article cites other notable works on assessment tools in IL. Keiser (2008) provides links to a variety of assessment websites.

Trainers need to set realistic goals and objectives which are specific and measurable in order to assess the course. They need to ask questions, upon which teaching and management decisions can be made, analyze the feedback and make changes based on feedback.

A challenge is to keep the course assessment tool short enough so that learners will answer, but long enough to make it useful. In SMU's library skills workshops we ask students to rate the session. We are interested in the characteristics of the course that may have contributed to any low ratings. Things out of your control, such as inadequate technology, including bandwidth or an unsuitable training room may also contribute to low ratings.

Grassian and Kaplowitz (2001, p. 265) highlight the cyclical and continual need for assessment. "We plan. We develop. We deliver. We assess and evaluate the results of assessment. We revise, deliver the revised materials, and assess and evaluate again. Perfection is always just out of reach; but continually striving for perfection contributes to keeping both our instruction fresh and our interest in teaching piqued."

Plan for marketing the course

In a well-known U.S movie, *Field of Dreams*, the lead character says, "If you build it, they will come". This is not the case with literacy skills courses, especially voluntary ones. The marketing approaches and communication channels differ for learners who are internal or external to the organization.

Factors affecting attendance include:

- a. Is the course compulsory? Is it for credit?
- b. Who initiated the course? You, your institution or a sponsor?
- c. What do you call your class? If you are training the "information literate", they are not going to be interested in attending a course called "Information Literacy"
- d. Is there a charge for the course and is it reasonable? Is food provided?
- e. Is the course in a convenient location at a convenient time for the learners? Is the training facility appropriate for the course?

If the literacy program is designed for either internal or external staff learners, their primary concern may be if the course is part of their professional development and if it will help their salary and promotion.

Another challenge is how to communicate with potential learners. Where do they get their information? In

considering how to market to our students, we were surprised when they said they preferred to get their university information from email and the university web; other institutions use instant messaging or social networking tools such as Facebook or Twitter.

Case study: applying the seven factors to developing and delivering a course: "First Steps in Becoming a Super Searcher"

The authors present this one-day course under the sponsorship of the Professional Development Committee of the Library Association of Singapore. The target audience is employees who need at least a basic level of information and research literacy: para-professionals, entry level librarians and potential trainers.

The case demonstrates how we apply the seven steps to designing, implementing and improving this course.

Understand your learners and their literacy needs

All attendees receive a pre-course information gathering email:

"To help customize the course, please tell us:

1. Your job title and roles
2. What you hope to learn from the course"

While most attendees take their learning objectives from the actual course information brochure, others state their own objectives. The trainers can then either modify the course, if it is appropriate, or manage the expectations of users whose needs fall outside the scope of the course. Trainers share the learners' expectations from the survey with the class.

Course objectives or learning outcomes

One basis for assessment of courses is whether they have met their objectives. Because our learners are already working in libraries and their organizations sponsor them, we assume a basic level of understanding of library-related services and technology. Therefore, our objectives are to build upon the basic knowledge.

- Search more efficiently and effectively using new search techniques.
- Differentiate among search features in the OPAC, online databases and the internet.
- Apply new skills when assisting users in the sponsor organization.

Prepare the course outline and match teaching method to content

In preparing Super Searcher's course outline, we created modules and were conscious of balancing the time needed with the realities of the attendees' behavior in attending training sessions. In many locations, based on traffic or

Table 4 Methods used in super searcher.

Module	Training methods
1 Understanding users and their information needs	Reference interview with small-group role playing and presentations Lecture Feedback from trainers
2 Search concepts and techniques Searching of the Internet Searching commercial databases	All learners have a computer and follow along with the presenter The co-trainer serves as back-up to help those falling behind Group setting Hands-on searching
3 Case study Creating search strategy Using new search tools and techniques Presenting results	Group oral presentation
4 What's new	Lecture

culture, assume that the course will start late and probably end early. However, do not let people who are on time wait too long so plan a welcome activity that engages the class but does not impact the content.

At the same time that we set the outline, we considered the best teaching methods to use with an emphasis on engaging the learners through interactive exercises and ongoing opportunities for questions. The Super Searcher class includes many training methods (Table 4).

To emphasize the importance of understanding user needs, we divide learners into groups of three; an information seeker who is given a reference question but asked to divulge minimal information to the information specialist who has to find out the real question. The third person acts as scribe, observing the personal interactions and reporting back to the group.

Question 3

User: I want some information on dengue fever

Background 3A

You are Dr. Boonthort, a medical researcher from Thailand. You have just joined a research team in Singapore. You need to know about the research that has already been done on dengue fever in Singapore and who are the key Singaporean researchers.

Background 3B

You are a parent who has heard that there is an outbreak of dengue fever in Singapore. You want to be able to tell if your child may have dengue fever and want to know the symptoms and treatments.

Example 1. Sample question

In Example 1, the information seeker asks the information specialist for information on dengue fever. The information specialist determines what level of information is needed and for what application.

Creating course materials

The first time we presented the course, groups were given an activity worksheet to help them create their search strategy for the case but some groups were never able to move beyond the constraints of the worksheet. Now worksheets are given out later as takeaways.

We do use PowerPoint, which serves as both a handout and as activity sheets. Blank sheets are included for learners to practice their search strings after following our examples.

We spend much of our preparation time developing content and keeping current with our search tools. In a hands-on-course, this involves finding relevant examples and continuously monitoring results on the internet and in databases.

Design assessment tools

In addition to the activity sheets in the PowerPoint handouts, the trainers use formative assessment techniques such as questioning and sharing, where learners receive immediate feedback. Summative assessment in the form of a short feedback form elicits responses about the course, the trainer, the facilities and marketing. Examples include using ratings of strongly agree to strongly disagree for questions such as:

- Course Objectives: I will be able to apply what I learned here to my work.
- Trainer Effectiveness: The trainer delivered the course effectively.
- Facilities: The room set-up is conducive to learning.

The authors are considering the use of pre- and post course knowledge assessment test for future such course runs.

Marketing the course

Marketing for Super Searcher includes:

The Attention Grabber in the Title or subtitle: On being a good searcher... "It's like a detective puzzle..." a published quote by one of the presenters. When rerunning a class, using a quote from a satisfied previous attendee is effective.

The Need: Trying to find answers to question such as...

The Target Audience: If you are curious and want to learn sustainable skills to search efficiently and effectively...

The main channel to reach our learners is the sponsor's website. We send personal emails to library directors and involve all committee members. In the case of Super Searcher, a limitation to these approaches is that they leave out potential learners who are not members of the

sponsor organization or working in traditional settings. We also use “word of mouth”, contacting past attendees so that they will tell their friends. To broaden the base, we can advertise on our own website.

Next steps

Trainers need to reflect, review and revise all aspects of the course. They need to keep up with new trends and developments and integrate them into the existing course or use these changes to build advanced sessions. Write about and share teachings and learning with others.

Readers of this article can market the appropriate level of literacy for their organization by becoming champions and advocating IL to their key stakeholders.

Go beyond the basics and create advanced training for specialized groups, such as post-graduate students, researchers, professionals and government officials.

Conclusion

In developing an “information literacy” program at a national, local or organizational level, it is necessary to cater for different levels of learners. This article presents the steps, examples and a case study to serve as guidelines. To be successful, every class, its trainers and its contents have to meet the strategic goals of the sponsoring body and the personal or professional needs of the learner.

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