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Making Information literacy a Compulsory Subject for Undergraduates: The Experience of the University of Malaya

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ABSTRACT

This paper will discuss the experience of the University of Malaya Library in running the Information Skills Course, which has been made compulsory subject for all first year students undertaking a first degree in the University of Malaya since the 1998/1999 academic session. This Information Skills initiative is an historic one as it is the first time that Malaysian university students are made to follow and pass a formalized Information Skills Course as one of the prerequisites for graduation. Providing information skills instruction and user education programmes have been the regular function of academic libraries undertaken by reference librarians. However, with the introduction of the Course, all librarians besides the reference librarians are involved in the teaching of information skills. Besides the increased workload, librarians often have to face the ignorance and indifference of some academic staff and students who questioned the academic credibility and standing of a course taught by librarians. As such the proposal for an International Information Literacy Certificate (IILC) is very timely as it would provide the international standard for an Information Skills curriculum, uniform training and tests. With international accreditation, academic staff will place more confidence on the quality and importance of an Information Skills course to enhance the learning capabilities of their students. However, for political expediency and greater impact, it is suggested that IFLA invites UNESCO to be a partner of the IILC initiative.

Introduction

Information Literacy

User education has always been an integral function of academic libraries for decades, and the term describes a variety of activities. Some of the terms that are used to describe the varied aspects of user education and the skills for information literacy include 'study skills', 'research skills', 'library skills', 'information skills', 'library orientation', 'bibliographic instruction', 'library instruction' and 'ICT skills'. These activities represent some of the initiatives of the user education librarian to equip users with the necessary skills to cope with the ICT revolution of the last decades of the twentieth century as well as changes in educational thinking such as concept of lifelong learning, independent learning and problem-based learning. The rapid development of the internet, the World Wide Web and the proliferation of information resources that are often unfiltered, has made information literacy even more urgent and important to the information consumer. How library professionals handle this new challenge is the subject of a large number of articles in the library and information science literature.

Information literacy and skills

Information literacy and information skills are often used to mean the same skills, although the United States and Australia preferred the term 'information literacy' while the term 'information skills' is used in the United Kingdom.

In general, to be considered information literate, a student must be able to:

- i) Recognize a need for information
- ii) Know how to accurately identify and define the information needed
- iii) Know how to locate information required efficiently
- iv) Know how to organise, analyse, interpret and evaluate information
- v) Incorporate selected information into his/her knowledge base
- vi) Use information effectively to accomplish a specific purpose

In addition to the above skills, the American College and Research Libraries (ACRL) states that the student must know how to use information ethically and legally while the Council of Australian University Libraries (CAUL) declares that the information literate student should recognize the need for information for lifelong learning and participative citizenship. The Standing Conference of National and University Libraries, United Kingdom (SCONUL) states that the student should be able to use and build upon existing knowledge to create new knowledge.

The United States has led in the information literacy initiatives with the establishment of best practices, standards, performance indicators, and outcomes drawn up by the Institute for Information Literacy, Association of College and Research Libraries (ACRL) to help librarians to develop, assess and improve their information literacy programmes. The Australian Library and Information Association also has well-developed information literacy programmes which are

implemented in most undergraduate programmes in Australia. SCONUL Information Skills Task Force (1999) also developed an information skills model based on a set of seven headlines skills.

Background

Malaysia has a population of over 23 million of diverse ethnic, religious and cultural background. It possessed a unified public educational system of schools, colleges and universities. In general, students will spend 13 years of schooling before admission to one of 16 public universities and more than 600 private institutions of higher learning.

Although school libraries or resource centers are still comparatively undeveloped in many schools in Malaysia, the importance of the university library in education has never been an issue. Unfortunately for a long time, the University of Malaya Library has mainly served as a 'bookshop' where lecturers place their book and journal orders; a depository for reading and research resources and a service center for borrowing, reading and studying. The librarian is seen as the manager of such resources and services related to the use of these resources with only a passive and silent role to play in the teaching, learning and research process in the university.

The adoption of new educational concepts such as lifelong learning and independent learning since the 1960's and 1970's should have provided opportunities for libraries to be more involved in the teaching-learning process. However these changes were not implemented in the University of Malaya and the Library continued to function as before until the advent of the internet .

The ICT revolution in the 1990s triggered off some major changes in public educational policies and programmes. It is the Malaysian government intention that ICT be an important vehicle in the dissemination of knowledge in schools to enhance teaching and learning and to prepare students for the Knowledge Economy. The implementation of the Smart School Project, one of the flagship projects under the Multimedia Super Corridor, requires schools to be equipped with computer hardware and multimedia peripherals to facilitate the teaching-learning process where students are active learners. It is hoped that this new learning culture will prepare them to be the knowledge workers of the future. This vision is also expressed in the Malaysian National Information Technology Agenda (NITA, 1996) which aspired that by the year 2020 a civil society will be created whereby every Malaysian will be information literate and equipped as knowledge workers, empowered by the new information technology. However, it is noted that often only the technological skills are given prominence while the information skills component of IT is neglected. As a result, students come to the university without these critical information skills though they may be proficient in using the computer hardware and systems. It has become the responsibility of the University Library to equip students with these skills.

User Education in the University of Malaya Library

User education has had a long history in the University of Malaya Library. In the early 1970s, at the beginning of each new academic year, all first year students were taken round the library by professional staff and the intricacies of author/title and subject card catalogues briefly explained to them. By and large, many of the users managed library usage by a process of trial and error. However those who still did not understand the numerous rules of filing were encouraged to seek help of the librarian at the reference desk. Besides library tours, a few formal programmes had been successfully implemented at the Institute of Advanced Studies, Faculty of Education, the Faculty of Law and the Department of South-East Asian Studies, Faculty of Arts as either special programmes or part of the research methodology courses offered by concerned lecturers. During

these sessions, the reference librarians taught the use of printed indexes and abstracts to some second or third students at the specific request of an academic staff. (Chall, D.K., 1993)

The need for more extensive user education was felt more urgently with the adoption of computerized library system in 1992 when students were introduced to online computerized catalogue (OPAC) for the first time. Students had to learn two new skills at the same time -how to search a computerized catalogue and keyboard skills. Sessions were organized for students at the beginning of the orientation week when students were taught how to search OPAC using Author, Title, Subject as well Keyword options. However these programmes were not very successful in terms of attendance and impact due to the following reasons – the programmes were not accorded any official status, thus did not receive the support of students or academic staff; the duration for the programmes were too short to be really effective; students were not given any hands-on experience and as such there was no formal assessment of the effectiveness of the programmes. As most students had no or very limited experience and exposure to library use and resource-based learning, they did not think it worthwhile to expend time and efforts to learn library use. (Zaiton Osman, et., 1998)

Formalising the Information Skills Course

Dissatisfied with the outcome of the informal user education programmes, the Library submitted a proposal to offer the Information Skills Course as a 2 credit course under the aegis of the Faculty of Computer Science and Information Technology with a maximum intake of 100 students. However, it was to become more than a faculty programme. At the time of the proposal, the University received a directive from the National Council of Higher Education (NCHR) directing all universities to incorporate the information technology components in the university curriculum in order that students are equipped with the necessary skills for the Knowledge Economy. The Deputy Vice-Chancellor (Academic Affairs), also the Chairman of the Library Committee, decided that the course's objectives and learning outcomes would fit the NCHR's requirements and mooted that it be opened to all first year undergraduate students as a compulsory university course, as he felt that the course would benefit all students.

The objectives of the Course are:

- i. To equip students with information-seeking skills so that they are able to efficiently and effectively retrieve information from a variety of sources, both print and computer-based, to meet their learning, teaching and research needs
- ii. Encourage resource-based learning among students
- iii. Provide an opportunity to students to expand or upgrade their current information technology-related skills, which are found to be rather limited, by exposing them to various IT applications and possibilities
- iv. Contribute towards making students independent learners with lifelong learning skills to enable them to make informed decisions and to become knowledge workers who can make productive use of information, knowledge and technology
- v. Assist the University in producing quality students who are computer-literate and information-literate

Thus from the 1998/1999 academic session, information literacy was made a compulsory subject in the University of Malaya, the first university to do so in Malaysia. It has not been easy to teach a minimum of 6,000 students per year. The logistics of organizing the classes and the professional input pose a tremendous challenge to the librarians at the University of Malaya and we are constantly reviewing the contents and delivery methods.

The Professional input

Although user education has been conducted for a long time, formalizing the programme requires extensive planning. The IS Task Force comprised of senior librarians who have an average 20 years library experience each, and committed to the philosophy of information literacy. The team worked out the objectives of the course, lecture outlines, exercises, assessment tests and examination questions. All librarians took their share of teaching although the main responsibility for running the course is entrusted to a particular division. It can be said that without the dedication and teamwork, and in particular the encouragement of the then Chief Librarian, Dr. Zaiton Osman, the Information Skills Course would not be able to take off.

Subject-based Programmes

The Information Skills Course is subject- or discipline-based. Although students are encouraged to know about subjects beyond their own disciplines, for practical examples such as reference sources, students are guided to examples in their own fields. As such students from the Medical Faculty will be taught how to identify medical reference sources in medicine and health care while law students, the legal sources.

Course Assessment

Students are assessed throughout the course. A mini-project and two short quizzes are allotted 40% while an end of semester examination takes up 60%. The objective of having the mini project is to ascertain whether students could apply the skills taught in the course. To produce the mini project, students have to search and use a range of printed and electronic resources and to compile a bibliography using APA style. The examination tested on the theoretical aspects and consisted of multiple choice questions.

Learning Outcomes

At the end of the course, we hope that students would have acquired the following information literacy skills and competencies:

- i) Understand and recognize the various types of references normally used by undergraduates such as books, chapters of books, journal articles and conference papers
- ii) Search the OPAC by fixed fields, namely by author, title, subject and call number
- iii) Interpret bibliographic information, call numbering, holdings information and a periodicals record
- iv) Identify and analyse a search topic or statement and generate keywords or search terms

- v) Conduct keyword searching and use keywords search techniques, such as Boolean operators, and truncations
- vi) Appreciate the value of and know how to use controlled vocabulary terms to search for information , such as LC, MeSH, and other thesauri.
- vii) Identify and use reference sources, such as dictionaries, encyclopedias, directories and statistical sources as indexes and abstracts
- viii) Use abstracts and indexes in CD-ROM and online formats
- ix) Access the Internet for information using appropriate search strategies
- x) Evaluate information sources, especially Web sources
- xi) Demonstrate responsible and ethical use of information by acknowledging and documenting sources
- xii) Compile a basic bibliography using APA style

Feedback/Evaluation of the Course

Students' Perception

A post-course survey was undertaken at the end of the Second Semester of 1999/2000 academic session as well as the First Semester of the 2000/2001 session. The views of some 1000 students were sought as to the usefulness of the topics taught in the Course in relation to searching information and to their learning as well as their assignments. The findings indicate that students are concerned with locating materials prescribed in their reading lists than with searching additional reference materials from periodical indexes or abstracts, whether printed or electronic. Almost 90% of the students rank OPAC as useful; followed by Search Strategy (85%) and Project Work (79.75%). However, topics ranked less useful are abstracts and indexes in CD-ROM format (70%), citation style (69%), and reference sources such as dictionaries, indexes and abstracts (60%).

These findings were supported by the feedback from the reference desk who reported that OPAC enquires from first year students was minimal as reflected in the statistics collected of reference enquiries. Students' views can also be tied up to the low expectations and demand of lecturers on students' reading and use of information sources beyond prescribed texts. (Chan, S.N, et. al, 2001)

Lecturers Perception

An informal survey on the Information Skills Course was also undertaken in March 2003 via the University of Malaya email network. Twenty-three lecturers submitted their observations and perceptions of the impact of the Course on their students' learning. Although the response to the survey was very insignificant in terms of number, the feedback of the few reflected the divergent views of academic staff towards the Course as shown in the Table below :

Survey on Information Skills Course: Lecturers' Response

Question	Response
Are you able to ascertain from the reference lists of your students' assignments that the Course has helped them :	
i) to retrieve more information resources other than that prescribed by you	7 (YES) 10 (NO) 6 (ABSTAIN)
ii) to read more and in greater depth (ideas, data analysis, etc)	4 (YES) 14 (NO) 5 (ABSTAIN)
iii) to use more electronic resources (internet, CD-ROM and online databases)	12 (YES) 6 (NO) 5 (ABSTAIN)
Based on the curriculum and skills taught in the course, will it help the students in the problem-based or interactive learning	19 (YES) 4 (ABSTAIN)
Are students more capable in retrieving information resources	15 (YES) 8 (NO)
Are references of students consistently cited in a reference list or bibliography of their assignments	13 (YES) 5 (NO) 5 (ABSTAIN)
In general, has the Course has succeeded in exposing students to searching and using a variety of information sources, whether printed or electronic, for their assignments	14 (YES) 2 (NO) 7 (ABSTAIN)

In general, the feedback from the academic staff showed their support for the Course. However the response also revealed that many students do not use their knowledge they have gained from the Course in their learning which would be indicated in their readings for their assignments.

Even the small group which responded had very diverse views on the Course as shown below :

- ✓ This is the Course badly needed by students (Faculty of Engineering)
- ✓ All academic staff and support staff should also be taught the skills (Faculty of Dentistry)
- ✓ Very useful. However lecturers need to encourage their students to use the knowledge gained. Otherwise students will not bother to retrieve more than one reference. Students must be taught to appraise the scientific materials otherwise students don't know what to do with the materials retrieved (Faculty of Dentistry)
- ✓ Students still do not refer to journal articles and conference papers. Many of them obtained information from the internet and books only (Faculty of Computer Science & Information Technology)
- ✓ Increase the depth and scope of the course. Increase the credit hours (Faculty of Computer Science & Information Technology)

- ✓ The course contents should be taught at year 1, 2, and 3 and not taught only in 1 year. When asked, students said they had forgotten everything because they were taught in first year. (Faculty of Computer Science & Information Technology)
- ✓ Could we focus on law materials only? Even lecturers would be interested (Faculty of Law)
- ✓ Do continue the course. Students are very internet savvy. However since I did not make a proper study of students pre-course and post-course I cannot be sure of marked improvements (Faculty of Law)
- ✓ I find students are not very good in preparation of bibliographies and they often leave out footnotes so reference sources left out. They do not make any effort to search for information for their assignments. They prefer 'cut and paste'. (Faculty of Law)
- ✓ I find my students are not very information literate. In my view, the course is very useful and has a lot of potentials, however it has not achieved its objectives. It is more appropriate if the course is faculty-based. (Faculty of Economics & Administration)
- ✓ Although I don't know much about the course, I think it is very important. (Faculty of Education)

The Library's Response

The Library's response to some of the points raised, and in particular the following:

- ❖ The course is conducted in isolation, not as part and parcel of any course taught by the Faculty. We need faculty cooperation to integrate information literacy skills in their courses. These skills can be taught by the librarian.
- ❖ One-hour weekly session is insufficient, the ideal is 2 hours per week, one hour for lecture and the other hour for tutorial / practical session. However, as the IS Course is only one aspect of the librarian's workload, and it is difficult for every librarian to expend more than 3 hours a week to teach. It is to be noted that the 3 hours are only contact hours in the class and do not include preparation, marking student work and time spent with weak students after class
- ❖ Academic staff must demand that students use a variety of information resources in their assignments so that students will make use of the information skills they have learnt

Where do we move from here?

Like other university libraries who have initiated similar course, be it a credited or otherwise, we also face non-cooperation and resistance from a few lecturers. However, the Library is encouraged by the positive comments from the email survey. We are aware of the weaknesses in the present structure and approach and we recognize that it should be integrated in the faculty courses for maximum effectiveness and relevance. We are optimistic that with the formal

adoption of problem-based learning (PBL) mode of learning and teaching in the University of Malaya in the 2003/2004 academic session, faculty will realize the importance of information skills in support of the PBL approach, and work with the Library towards including information literacy and skills in the undergraduate curriculum. Assessment of skills acquired by students via the mini-project attested that most students have acquired the basic skills listed in our learning outcomes. However, these skills must be applied. We need Faculty to encourage and demand that students use the information skills learnt for their assignments which should be reflected in an increase use of non-prescribed texts and proper documentation of reference sources used.

The Information Skills Course has been conducted for five years and more than 29,350 students have followed the Course. It is now an integral part of undergraduate curriculum and its value will be tested when the problem-based learning or resource-based learning curriculum is implemented university-wide this year. PBL will require students. With this development, information skills should be perceived as core skills for independent learning as students are expected to search, locate, evaluate and use information to resolve problems/issues. The issue of academic acceptance of the course would be greatly resolved if the Information Skills course receives the endorsement and certification of an international body that is recognized by the Malaysian government.

An International Information Literacy Certificate (IILC): Will it help?

The proposal of an International Information Literacy Certificate is a very good idea both for the library profession and the advancement of the Information Literacy (IL) agenda at the local, national and international levels. There are lots of IL materials already available to form the basis of the IILC - the standards, models, syllabus, objective, learning outcomes and the large number and variety of IL instruction programmes for different levels and subjects, developed in different institutions that can be used. Librarians all over the world have always been very generous in sharing information and ideas and we have learnt a lot from the many sites in the Net pertaining not only to information literacy but in a variety of library subjects.

However as outlined in the discussion paper by Cristobel Pasadas Urena, many issues need to be resolved before the IILC proposal can progress from paper to implementation. There must be agreement between the parties concerned as to the IL agenda for the different educational segments which should take into consideration the national, political and language differences of the country/ region as well as its educational and technological levels to fit the proposed programmes into local, national and regional specifications. There should be also provision for credited and audited programmes. Other concerns should include the organizational set-up of the test centres, the learning centres and financial aspects of running the IILC. Fees charged for taking the various models must not be too high, and should take into consideration the financial capabilities of the prospective candidates of the various countries.

Assuming all the above issues are resolved, and the IILC becomes a reality, will the IILC help the Information Skills Course gain the recognition of the University of Malaya faculty that the course is vital for student learning? I believe international certification and endorsement may help to some extent but it depends on the university and government acceptance of IFLA as an international professional body.

Some Reservations & Conclusion

I believe there are two issues that need to be addressed and resolved before the proposed IILC can move successfully from the drawing board to reality. Firstly, information literacy may be actively

accepted by educational authorities in many developed countries such as the United States, Canada, Australia, New Zealand and the United Kingdom but still not so in Malaysia and many other countries in Asia and Africa. What about employers in these countries? Do they consider information literacy a critical requirement for employment? Unlike computer literacy, information literacy is not classified as a critical success factor for a productive worker. Employers want workers who are critical thinkers who can cope with the massive information flow and rapid growth of knowledge. Therefore, it is important to inform and convince employers that information literacy programmes will help to produce the type of knowledge workers that they desire as they will be equipped with the necessary skills to search, evaluate and use information efficiently and critically to create new knowledge. Active promotion campaigns would, therefore, be required to advertise this information to the relevant political authorities and prospective employers? The viability of the IILC depends on the marketability of the IILC and the support of the government and the educational and business sectors.

The second issue that need to be discussed is the position and standing of IFLA and the national library associations in the national and international arena IFLA and other library associations, are seen as only professional organizations, and thus do not have any political standing or influence in the political, educational and business sectors of Malaysia, and possibly in many other countries. Without the political support of the government and the businesses, information literacy and IILC will not been taken seriously by prospective employers. As a consequence, prospective candidates would not want to expend time and money to study and qualify for the IILC. To ensure acceptance of IILC, it is suggested that the IILC be endorsed by another international organization that is recognized by the governments.

Unlike IFLA, UNESCO has always exercised an important influence in national educational policies. The Ministry of Education, Malaysia and its machinery have always adopted and followed educational trends and policies initiated by UNESCO. It is felt that if IFLA work together with UNESCO and undertake the IILC as a joint UNESCO-IFLA project, then the IILC will receive greater acceptance from the Malaysian government and the educational authorities. UNESCO has always worked very closely with the Ministry of Education and the National Library of Malaysia to promote literacy and library use. As one librarian observed that when 'UNESCO sneezes, Malaysia (and other Asian countries) will get the flu'. UNESCO has always been seen the champion of educational, scientific, and cultural progress for developing countries and any UNESCO initiatives will be accepted and implemented at the national level. Let UNESCO been the patron of IILC while IFLA and the national library associations run the IILC centres.

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