Embedding information skills on student learning: providing the models

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Background and rationale

This Phase 3 (evaluation and embedding) project has been developed from a highly successful earlier project: Embedding information skills on student learning: making the difference (2006). The earlier project produced a programme of information literacy skills, based on SCONUL’s Seven Pillars of Wisdom, which was delivered to two modules of first year students from the School of Humanities, Languages and Social Sciences (HLSS) in bite-sized presentations at the end of their lectures. Importantly, it found that: “an effective Information Literacy programme delivered at the very beginning of Undergraduate life can contribute significantly to students’ ability to find, use and record information and increase their confidence regarding academic performance.” Bastable and Morris (2006). Valued by students, it clearly had a part to play in the learning experience of first year undergraduates and potentially in Schools’ retention and employability strategies. This was the impetus for a Phase 3 project which would test the information literacy programme on a more diverse range of students and subjects within HLSS and provide models which would encourage further take-up within the School and other Schools in the University.

Other important outcomes from the previous project also needed to be carried forward and tested in a wider context: “We as librarians have been able to assess our approaches to the design and delivery of a structured Information Literacy programme. We have had the opportunity to work collaboratively as a team of librarians with academic staff and, crucial to the embedding process, earn important space on first semester, first year modules. We now know that the bite-sized sessions of information skills which are dove-tailed into existing lectures are a successful way to deliver the programme.” Bastable and Morris (2006). It was this combination of the following three features in Phase 2 which distinguished it from any other work being conducted in the field of information literacy: the partnership between academics and librarians, a structured information literacy programme and delivery in bite-sized sessions. So, it was these three crucial areas which would be put to the test in this current project by the delivery to an extended range of students.

Methodology

The same action research methodology of Phase 2, based on actual programme delivery in academic environments, was extended to a wider range of subjects. Interest had been generated amongst academic staff by dissemination events and informal contact and by the success of the previous project and some were enthusiastic about working with librarians to...
establish an information literacy programme in their first year modules. Social Work, Deaf Studies and English Plus Preparatory Award (EPPA) module leaders volunteered to join the project. This brought in two courses with professional accreditation and one pre-undergraduate course of international students.

The two academic staff who had worked with us on Phase 2 were keen to run the programme again in their modules in Writing for Academic Success FD1000 and Images of Inequality SO1000. Writing for Academic Success is a cross subject first year academic skills-based module and Images of Inequality is a Social Care module which also has students from Social Policy, Health, Criminal Justice and Psychology. It was agreed that the sessions should run as far as possible, on the same lines as the previous year. This had involved the lecturer staying whilst librarians delivered a series of presentations, and contributing as appropriate.

Individual sessions were mapped out carefully beforehand with the module leaders. Particular consideration was given to timing, especially the date of the first assignment. This had been identified as important by students in the earlier project. Wherever possible, sessions were related to module outcomes. Presentations were mounted on WOLF, the University Virtual Learning Environment (VLE) after delivery.

**Individual models**

**Social Work**

A two hour amalgamation of the seven information skills presentations had been run for first year Social Work students during the previous year. It had served as a useful counterpoint to the bite-sized sessions when evaluating the project. This year, based on student feedback, the lecturer suggested that a forty minute workshop should follow each bite-sized presentation to reinforce it and aid skills acquisition. Social Work academic staff at this University recognize the importance of developing IT skills in students in readiness for their place in an increasingly paperless profession (Rafferty and Holt 2005). Therefore it was agreed that Learning Technology Advisors who are based in the Harrison Learning Centre should deliver two sessions on using email and file management. There were seventy five students in the first year and as there are a limited number of PCs in the computer laboratory, it was suggested that the sessions and accompanying workshops should be voluntary and students would choose which ones to attend. Students signed up for each weekly session which was run at the end of that day’s lectures and seminars. Attendance varied from thirty to three, but averaged at around eighteen and always consisted of mature students. A lecturer was present at each one and contributed information, made comments and confirmed points as appropriate. An academic information assistant, along with the librarian and lecturer, assisted students on a one to one basis during the workshop. The nine week information skills programme for the Social Work module SO1007 Preparation for Practice is in Appendix 1.
Writing for Academic success

2006/07 witnessed a dramatic increase in student numbers for Writing for Academic Success (FD1000), which rose to over two hundred in Semester One. This necessitated unanticipated changes: the lecturer decided to run the module with four iterations per week, organized in two blocks of back to back sessions in conventional class rooms, one of which was not conducive to teaching or interaction with students. This meant that hands-on time, planned originally to consolidate the session, could not take place. Four information skills sessions based on presentations were offered (as in Phase 2), at the end or beginning of each lecture in its four weekly iterations. Time restrictions meant that the lecturer did not remain for any of the presentations but made positive comments to students as to their usefulness. Running such sessions back-to-back resulted in pressure on the librarians to end their first session to allow the second iteration to start. In Semester two, one iteration of FD1000 was held in a teaching environment with fifty PCs which allowed the students to have a limited amount of hands-on time.

Social Care

Librarians and lecturers agreed a programme of 6 sessions for Social Care; however, an unexpected increase in student numbers, rooming issues, time pressures on the curriculum and a new academic member of staff teaching on the module, led to a rethink of how best to meet the needs of the students and lecturers involved. Academic staff identified a real student need for hands-on experience of information skills which would also strengthen the knowledge some of these students had acquired whilst on the Writing for Academic Success module. The outcome was a one-hour workshop session (delivered in 2 iterations) using Room MD212b, with both lecturers and librarians present in the workshop to assist students.

One advantage of the workshop was that it provided the opportunity for librarians, lecturers and students to build more of a rapport which encouraged students to ask questions – a colleague involved commented that “students can ask you at the time, but if they were struggling, they wouldn’t make a special attempt to see you later”. Having lecturers present was useful for students and librarians involved in that they could emphasize and comment on certain resource. One problem that was encountered was that running the sessions back-to-back meant that students in the first session had to finish early to allow the second session to start on time (as with FD1000).

Deaf Studies

Deaf Studies offered a further model based on partnership working, which, potentially, could give great immediacy and contextualization to the sessions. It relied on an individual meeting between lecturer and librarian before each lecture when the desired outcomes were discussed. The information literacy component picked up on the topic under discussion for each week, both to reinforce the relevance of the skill and to assist students in that week’s task. Following these meetings, seven information literacy skills sessions were planned, to run as twenty minute slots during a three hour lecture in the first semester.
Approximately fifty five students were enrolled on the module, although attendance was less. The lecturer remained in the room during the sessions and was an active participant.

EPPA

Tailoring the programme for the international students on the EPPA course involved combining some sessions, for example, OPAC and online journals and leaving out others, like Harvard referencing, which would be delivered by lecturers. This reflected lecturer preferences and course assignments and was delivered in two iterations during the first semester. Students were on the intermediate EPPA course and the module leader suggested an accompanying workshop to give hands-on experience. In the second semester, presentations and workshops were run for an average of fifteen EPPA students on the Advanced Study Skills module, EG0008. The model used was the same as for Social Work: a twenty minute presentation followed by an hour’s workshop, with lecturer, librarian and academic information assistant present.

Findings

These results show the impact of the academic working environment on important aspects of the current phase of this project. The three distinctive components which were developed in Phase 2 have all been tested in a wider arena, and it has been necessary to make significant changes to all of them. At least one aspect of the original programme has been altered in every one of the modules we worked on this year, with the original two modules subject to dramatic changes. Student feedback has given, as before, valuable guidelines as to the effectiveness of the programme and useful suggestions for its improvement.

Key organizational aspects of the information skills programme were subjected to strong pressures to change at both the planning and implementation stages. In all cases this was negotiated in a flexible, open way by academic staff and librarians. Pressures on the Social Care module (outlined previously in the Methodology section), resulted in the planned programme being delivered as a one-hour workshop. This workshop was well evaluated by students and the academic staff involved, however the consecutive, context-sensitive, structured elements of the programme as originally conceived had been abandoned.

The large rise in student numbers on the module Writing for Academic Success inhibited the development of a model which the librarians hoped to deliver. Poor teaching rooms, lack of PCs and severe time constraints were responsible. Twenty minute presentations were extended by an hour long workshop to cater for International students on the EPPA module. The structured programme of eight bite-sized presentations was reduced to two sessions, each amalgamating two of the twenty minute sessions by lecturer request. Students on this pre-undergraduate course are expected to engage with a project at an early stage, so needed help with finding appropriate information and resources as a priority. In addition, lecturers preferred to teach referencing themselves, so they could address particular issues in plagiarism. The consecutive, bite-sized sessions were upheld in the Social Work module, but extended by a forty minute workshop. Student numbers became self-selecting rather than all-inclusive due to lack of appropriate IT facilities.
Another module which reflected curriculum, time pressures and staff shortages involving a change of module leader was in Deaf Studies. As the Resource Librarian reported: “owing to external factors beyond our control and other considerations within the teaching programme, some IL slots had to be cancelled or considerably shortened. The result was that they actually ran as 5 sessions, ranging from 5 to 30 minutes in length, spread over almost 3 months.” The module leader commented on a student intake which “had the widest spread of ability since 1996.” She found the librarian offered a change in tone and style to each lecture.

**Partnership: librarians and academics**

A strong partnership between academics and librarians can alleviate some first year students’ anxieties and could be a component in increasing their levels of confidence about their information skills. Despite organizational and other issues, librarians and academic staff found collaborative working helpful. The Deaf Studies Resource Librarian wrote that: “both the librarian and lecturer found that the sessions seemed disjointed and were very time intensive to plan as a joint endeavour on a weekly basis. Although tying in each IL skill with that week’s corresponding topic did highlight the relevance of the skill, the librarian found that it put constraints on the teaching of it, as the one could not always be mapped easily on to the other. However the librarian benefited greatly from working more closely with the academic staff as it was an opportunity to learn more about how the subject is taught and how the Deaf Studies/Interpreting subject division operates.” Other librarians found similar insights into the life and subject content of the module helpful. It was also useful to know which web sites, journals and books the lecturers favoured as well as which ones they did not. Four lecturers commented that they had also acquired new knowledge and picked up new web sites, online journals or useful techniques which they could incorporate into their teaching.

Students on the Social Work focus group said: “It is good to know that lecturers appreciate what we don’t know and that they are in the sessions seeing us being taught” and “I appreciated Voy (the academic information assistant) and the tutors for being on hand for giving students confidence to ask questions when falling behind especially on IT”. This was echoed by: “the lecturer can see what students are struggling with and can help the LIS staff focus in on these areas of weakness” and “it is good that the lecturer is with us on a more personal basis, not only in lectures.” These comments suggest an appreciation of the additional contact with lecturers in the more informal setting of a workshop. This was replicated by students in the focus group for Writing for Academic Success who did not have workshops, but welcomed the presence of academic staff in the session as they felt that the lecturer could “point out what would be really useful to them”, reflecting the “fact of life” that many students will ultimately look to a lecturer for guidance, even in the area of information resources.
**Partnership: input from the literature**

Features of the Project that have been notably successful include the partnership between librarians and lecturers and the flexibility of the programme, including its content and delivery. Bruce (2002) notes that “Information Literacy education is not possible without partnerships”. This partnership between librarians and lecturers can be mutually beneficial. Both sides bring different skills and perspectives to the sessions that can together provide a more “rounded” picture for the student and ensure that the contents are at a suitable level. For the librarian, having a lecturer present can help to establish in students’ minds the link between the lecture and the resources of the Learning Centre. As McDowell (2002) concluded: “Librarians have greater knowledge of the fast-changing electronic information environment whilst lecturers have the subject knowledge and responsibility to manage student learning. The two professional groups may also bring different perspectives on the problematic balance between student autonomy and student support.” A librarian who is new to the subject can benefit from a lecturer’s subject expertise, just as lecturers can learn from a librarian’s information retrieval skills and resource knowledge. Having the librarian present can bring a change of tone, pace and approach, and as one lecturer commented, it can show to first year students that other channels of support are available to them besides the lecturer.

The content of any sessions benefits from negotiation between librarian and lecturer. Research elsewhere has shown that subject-specific sessions work well and are of more relevance to a student, and as Bent (2006) notes “the integration of information literacy requires understanding from both subject and information perspectives”.

**Dissemination events for academics**

Librarians have been involved in two internal dissemination events during the academic year of Phase 3. The first was a video which was made of the Project and shown to the audience for the Rewarding Excellence Awards in January 2007. This prompted enquiries from interested members of academic staff from the School of Health and the School of Education. In both instances, referral to subject librarians in these areas has resulted in the implementation of an information literacy programme in particular modules in each school.

A two hour slot on the CELT programme for University staff resulted in eleven academic staff from five schools attending, along with two librarians. This encouraged academic staff in Linguistics and Creative Writing within the School of Humanities, Languages and Social Sciences to develop programmes for their subjects with librarians. Librarians and academic staff are collaborating, too, to produce an information literacy programme for modules in different subject areas throughout the School of Sport, Performing Arts and Leisure.

The success and feedback to both events suggest that there is an increasing awareness of the importance of information literacy amongst academic staff in the University, and a willingness to incorporate it in their teaching programmes.
Students

As in Phase 2, questionnaires, interviews and focus groups were used to gain both qualitative and quantitative feedback data and as before, the gathering of this data has proved to be a difficult exercise. Even with financial inducements, students appeared reluctant to participate in focus groups. Given that only a minority of students attended a focus group meeting (and these students were self-selecting) it is difficult to gauge if their views reflect the views of the student body as a whole. A further dilemma (as with any statistical data gathered) is whether we respond immediately to any findings (this may sometimes only involve a few minor modifications) or whether we need to follow-up by working with a larger representative cohort, and with more in-depth analysis. Whatever is decided, working with the students involved in the Project has been enormously valuable to the librarians involved, allowing us to gain feedback on the first year student experience from the “user’s” point of view. Did we meet their expectations? What were their expectations? What can we do differently?

Phase 3 confirmed some of the findings from Phase 2, but at the same time revealed a dichotomy between various subject groups. Selected feedback is discussed below.

The usefulness of information skills training to students is indicated by the fact that 18 of 28 FD1000 students who completed the survey wanted to develop their information skills further: similarly, over 50% of Social Work students attended either 8 or the full 9 sessions, with one Social Work student commenting that these “should be compulsory”. The academic necessity for such sessions is perhaps highlighted by the statistic that 21 out of the 28 FD1000 students never, or only sometimes, checked the academic level of an information source.

In Phase 2, feedback from students had indicated that they did not require a session on OPAC (they felt that they could work this out for themselves), but in Phase 3, 26 out of 27 EPPA students, 25 out of 36 DF students and 9 out of 13 Social Work students found learning about OPAC useful. Such a finding perhaps reflects the needs of some of those particular student groups – the Social Work students were a self-selecting group who had recognised their need for extra help and the EPPA students were unfamiliar with the library system. Such a dichotomy in viewpoints needs to be borne in mind when planning future sessions.

Another interesting divergence in views concerned the Internet. 8 out of 36 DF students did not find database searching useful, and similarly 7 out of the 36 did not find Internet searching to be of use, with one student commenting that “…I think everyone at uni would know how to use a search engine” (if only that were the case).

Feedback from some students highlighted the fact that librarians need to look at how they and lecturers can best describe the content and level of the sessions on offer, to make them sound as attractive and relevant to students as possible. One Social Work student commented that “I assumed (the) level was basic, but when I actually attended, I learnt more than I thought I would” and another student commented that “some students were put off by the seemingly simple titles of the sessions”, whilst another said that the “title of the
sessions suggested a lower level of difficulty” (see appendix 1). This may seem a trivial point, but if we are to reach out to those students who are not interested in “the library” or believe that they can learn nothing new from such sessions, then librarians must improve their marketing skills.

However, despite the comments regarding the description of the sessions, most students did find that the sessions were at the correct level for them. For example, 11 of the 13 Social Work students thought them to be at the right level, and this finding was supported by FD student focus groups. The only divergence from this was that 7 out of 36 DF students found that they were too basic, but this can perhaps be accounted for by their views on the Internet session. However the sessions are delivered, though, feedback from first year students across all subjects stressed the need for handouts.

Workshops were well evaluated as the following comments from the Social Work focus group show: “when learning about IT, it is better to have a workshop scenario than self-study materials”, “presentation and workshop balance was good, but ideally I would like more workshop time”. The linking of IT sessions by learning technology staff with the seven information literacy sessions was considered a success by the group of mature Social Work students. It offers a strong model for the future for students on professional courses. Feedback from students on both the Writing for Academic Success module and the Deaf studies module indicates a strong preference for the presentations to be reinforced by direct workshop experience. A Deaf Studies student put the benefits of having workshops clearly: “a more practical basis would be better as people learn more by doing than by just being shown.” The ideal scenario was envisaged by a lecturer who would like to have a “hear, see” session followed by a “do” one.

Benefits and evaluation

Information literacy programmes have great value for first year students when delivered with a subject focus as has been proved in this and in previous projects. Students from all modules appreciated the benefits of librarians and academic staff working together, whether in the classroom, lecture hall or workshop setting. The link into the life of the module, though, means that it will be subjected to all the pressures and constraints of delivery of the curriculum, timetabling and rooming. The need for flexibility is paramount. This project has demonstrated that changes to rooming, method of presentation and subject matter have to be accommodated, sometimes at short notice. Far from being deleterious, such adjustments can add in immediacy, focus and relevance to the sessions. Flexibility may seem an intangible element but it is vital to the success of any model. Circumstances (as has been shown) can quickly change, be it a rapid increase in student numbers or poor accommodation. Building in flexibility requires forward thinking and planning from all those involved. Flexibility can be underpinned by having a Resource Bank of generic Reusable Learning Objects that can be customized to meet the needs of a particular subject. Having such a Resource Bank allowed librarians to draw upon ready-made sessions at short notice.
Future developments

Any Information Literacy programme of the future will have to evolve on a continual basis to match the Teaching & Learning situation within the University. Furthermore, any model cannot be a “one size fits all” – the University has a diverse student body with different learning styles and learning experiences; trying to accommodate this means that a multi-approach model may be necessary. As there is currently no institutional or departmental definition of Information Literacy, nor any University-wide model, any programme of information skills will depend very much on the interpretation of the librarian or lecturer involved. The following are suggestions which could extend, enrich and widen individual programmes:

- audit of academics to establish their views and understanding of information literacy
- measurement of the impact of information literacy programmes
- reflective learning – this would encourage students to think about what they have learnt and the use they have made of it. It may be that only motivated students would actually make use of this, and that others would use it only if required to do so
- blended learning – using an online element and face to face delivery. The bite-sized sessions could be supplemented by online interactive guides – these are currently being developed. Again, there is the problem that they may not be used, unless students are given marks for using them
- benchmarks of information literacy for each year of study
- increase the profile of information literacy by including it in module learning outcomes
- add information literacy components to the module assessment
- pre-assessment of the information skills level of students

Resulting actions

This project has revealed some of the pressures of the academic working environment and the need for adaptability and flexibility for librarians involved in delivering an information literacy programme. In view of these findings, and the fact that academics generally welcomed such input, a new initiative has recently been launched in the School (HLSS). All lecturers have been sent a document “Information skills sessions for first year students” (see Appendix 2) which sets out each of the seven skills, based on the SCONUL Seven Pillars of Wisdom (SCONUL 1999), mapped to the appropriate level of novice/advanced beginner. The purpose of each session is explained. Academics are invited to contact librarians to negotiate, on a “pick and mix” basis, a programme (or partial programme) of sessions which will fit the needs of the module and add relevance and timeliness to the student learning experience.

The Resource Bank which underpins librarians’ ability to deliver a variety of sessions is being updated and developed to offer a greater range of presentations and supporting material including interactive quizzes. This Bank of customisable learning objects, if added
to on a regular basis, could be vital to the development of future information literacy programmes both in HLSS and other Schools in the University.

Bibliography


Rafferty, J. and Holt, J. (2005) *Building skills into the curriculum: a guide to meeting the requirements for social work degree students to achieve information and communication technology skill.* SWAP.


http://www.sconul.ac.uk/activities/inf_lit/seven_pillars.html.


Appendix 1

The following is an extract taken from the module guide for SO1007. The topics in teaching and learning for each week are outlined, followed by the title of the information skills session in bold.

Social Work SO1007 – Extract from Module Guide

Programme
Topics covered in teaching and learning:

Week 1 26 September
Morning and afternoon:
   Introduction to the Module.
   Learning styles
Study time and Independent Directed Learning:
   What is social work?

Introduction to information skills

Week 2 3rd October
Morning, afternoon, study time, IDL:
   Recording and Report writing
Information skills:
   Using WOLF

Week 3 10th October
Morning, afternoon, study time, IDL:
   Issues in professional employment: supervision and support, dealing with stress and dealing with difficulties in the workplace.
Afternoon:
   Shadowing opportunities
Information skills:
   completing on-line forms and filing Word documents, sending e-mails with attachments.

Week 4 17th October
Morning, study time, IDL:
   General Social Care Council Code of Practice
   Anti-oppressive practice
Afternoon:
   Briefing and workshop on Assignment 1
Information skills:
   Keyword searches to assist in writing assignments

Week 5 24 October
Reading week
Week 6 31st October
Morning:
  General Social Care Council Code of Practice
  Anti-oppressive practice
  Tutorials on Assignment 1
Afternoon:
  Dealing with violence and aggression
Study time:
  Time management
IDL:
  Health and safety legislation
Information skills:
  Harvard referencing: inserting references into the text

Week 7 7th November
Morning, afternoon, study time and IDL:
  Service User experiences
Information skills:
  Harvard referencing: bibliographies

Week 8 14th November
Morning and study time:
  Communication skills
Afternoon and IDL:
  Social Care Organisations
Information skills:
  Information from the Web: Subject Gateways and evaluating web-sites.

Week 9 21st November
NB. Morning groups replaced by an on-line activity on Social Care Organisations
Afternoon and IDL:
  Social Work process
Study time:
  Communication skills
Information skills:
  Advanced searching on the Web; setting up and organising bookmarks

Week 10 28 November
Morning, afternoon and IDL:
  Assessments
Study time:
  Identifying learning needs and the PDP
Information skills:
  Journal articles
Appendix 2

Information Skills sessions for first year students

| Starting to search | - importance of using information of a suitable academic level  
|                    | - different types of information sources (books, Internet, journals) – selecting the most appropriate  
|                    | - making best use of a module reading list  
|                    | - using books  
| Purpose:          | To make students aware of range of resources available to them  
|                   | To equip students with the skills to undertake a basic information search |

| Using keywords    | - identifying keywords to use (from sample assignment questions) when searching  
|                   | - planning a search strategy  
| Purpose:          | To highlight the importance of analyzing an essay question  
|                   | To equip students with the necessary skills to use keywords |

| Searching the Internet | - the Internet as a source of information  
|                        | - effective searching techniques  
| Purpose:               | To make students aware of the limitations/benefits of the Internet as an information source  
|                        | To equip students with the skills to search effectively and efficiently |

| Evaluating Internet sites | - importance of evaluating sites  
|                          | - how to evaluate sites  
| Purpose:                 | To make students aware of the need to evaluate sites  
|                          | To equip students with the skills to evaluate any sites they find |

| Databases              | - different types of databases  
|                        | - accessing and using databases |
**Journals**
- journals as an information source
- accessing and locating journals (print and online)
- finding journal articles (from a reading list)

**Referencing**
- importance of Referencing
- how to reference
- avoiding plagiarism

**Benefits of sessions for academic staff:**
- Students are aware of the range of resources available to them
- Students equipped with the basic skills to find and make use of the available resources
- Students aware of the need to evaluate resources

Sessions are aimed specifically at first years, and can be tailored to suit the needs of a subject/module/assignment. Sessions can be:
- subject/module/assignment specific
- presentations/workshops/quizzes (dependant on suitability of room)
- provided consecutively or at intervals

Lecturers are welcome to stay and contribute to the session (or leave if they so wish)
Handouts for students will be provided
Online support material can also be made available