

INFORMATION LITERACY FOR STUDENTS IN EARLY CHILDHOOD

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Abstract

Work-in-progress is summarised for the Generic Information Skills Training (GIST) project which aimed to teach information literacy skills to first year undergraduate students at the Institute of Early Childhood, Macquarie University. The findings in the first year of its two-year cycle suggest significant benefits to student learning. The success in the acquisition of generic information literacy skills is interpreted to be a reflection of the learning design of the project, which took as its cornerstone, the contextualisation of the targeted skills within the course tasks and assessments.

Keywords

generic IT skills training, information literacy, early childhood

Background and Rationale

This paper will report on a collaborative project, Generic Information Skills Training (GIST), between the Institute of Early Childhood (IEC) and the Macquarie University Library Information and Technology Training Unit (I&TTU). Integrated within the first year core course unit *Early Childhood Teachers as Researchers*, GIST was framed within the context of developing information literacy skills in a flexible, web-supported learning environment. The extensive use of online technologies in the delivery and teaching of the unit, combined with the need for students to develop information skills involved in locating, managing and using information for learning, research, and work-based purposes called for an approach to the development of information literacy that recognised the synergy between IT and information skills (Bruce, 1998; George & Luke, 1995). While these skills and capabilities are recognised as being essential for the duration of the students' university careers, they are also central to the definition of lifelong learning, and therefore constitute a significant component of undergraduate students' education (Candy, Crebert, & O'Leary, 1994). The rationale for GIST was further supported by the generic definition of information literacy put forward by DETYA (2000) as "the set of knowledge and skills needed to use information technology at a level appropriate to a person's position, work environment and discipline and the ability to continue to develop them into the future."

The teaching of information literacy is not uniformly adopted in universities (Winship, 2000) and comparisons between student groupings reveal significant differences with respect to access; females report significantly fewer skills than males, and part-time and distance students report significantly fewer skills than full-time and on-campus students (Oliver & Towers, 2000). At IEC, nearly all students are females, nearly half are enrolled as part-time and about a third are distance students, thus making these students a clear focus for support programs in information literacy. Although ongoing Library workshops on various information literacy components (including IT skills, and information access and management skills) have always been available for students on the basis of need or interest, student feedback indicated that the skills and knowledge they gained were not easily generalised to learning and work-based contexts. Therefore, the strategic collaboration for the GIST project between the I&TTU and IEC provided an ideal learning partnership to teach information literacy by interweaving the skills and competencies into the unit requirements and assignments. Such an integrated approach has been demonstrated to yield favourable learning outcomes (Soucek & Meier, 1997).

Project Description

Teachers as Researchers was taught in 2000 in flexible mode over 11 teaching weeks in a weekly two-hour lecture, and one-hour tutorial format for internal students, and two on-campus days for distance students. A supporting unit web site provided access to digital lecture recordings, lecture materials, tutorial exercises, and online discussions through the bulletin board (contribution to which were a course requirement). Lecture recordings (both online and tape) and print-base materials were provided for distance students.

The information literacy skills to be developed encompassed many of the core skills defined by the Information Literacy Standards developed by the Council of Australian University Librarians (CAUDIT, 2001) and included key-boarding skills, proficiency in using email, bulletin boards and online discussion groups, and proficiency in locating, using and authenticating information on the world wide web, as well as using web-based interfaces to online research databases. Training was integrated into the teaching program in the following manner: on-campus students had four face-to-face workshops run by the Library's I&TTU in the tutorial sessions in weeks 1, 3, 5 and 7; distance students had these sessions embedded within the weekend on-campus school, as well as evening workshops. The workshops covered: a) accessing and using the online unit, b) using online research databases I, c) advanced use of online research databases II, and d) searching the Internet for scholarly material. Training booklets were provided for each workshop to assist in the review and consolidation of skills. In addition to these set workshops, two safety net sessions were available to students needing further support. Ongoing consultation with the I&TTU staff was available for students with queries.

Each workshop interfaced with an assessment task which required the use of the skills and competencies acquired. The tasks covered: a) compulsory weekly bulletin board discussions to encourage students to reflect upon and apply the course content, b) an individual research project proposal in which evidence of the use of electronic research databases had to be demonstrated in the background and rationale section with the hardcopies of the referred online abstracts attached, and c) a collaborative research project which required the students to augment their background research with scholarly material obtained from the Internet. To assess student gains in achieving the required skills, a Core IT Competencies Inventory was developed. This tool determined the baseline as well as the post-training measures in students' PC skills, accessing the unit online, accessing and using online communication facilities, finding and retrieving information from electronic databases, and searching the Internet for scholarly material. Additionally, students also completed an online unit evaluation which sought to examine their experiences of the integrated approach to acquisition of information literacy. In particular, information was sought on the effectiveness of the training and support provided in each of the workshops, the usefulness of the training booklets, and the overall experience. The results of the online evaluation are reported below and in the accompanying Table 1.

Results

Of the 292 students enrolled in *Early Childhood Teachers as Researchers*, 237 students completed and submitted the online unit evaluation, of whom 77% were on-campus and 22% were distance students; 30% were mature-age (over 25 years) students; 46% were first year and 35% were third year students. On average, 9% of the students reported not to have attended each of the workshops.

The results from the online evaluation revealed that overall, majority of the students improved their computing and Internet skills as a result of the training (Table 1, Item 1). Following the first workshop on accessing the online unit, only 30% felt they needed additional training in navigating the unit site and using the communication facilities; however, only 7.5 % reported to have attended a remedial Library workshop. Any additional training needs were met by Library reference desk (19.8%), peer assistance (43.4%), teaching and technical staff (16.4%), information on unit web site (27.4%) and accompanying booklets (42.6%). The training booklets were regarded as being helpful (Table 1, Item 4); nearly 67% of students had referred to them sometimes, often or always.

Questionnaire items	% Response				
	5	4	3	2	1
1. Assessment of computing and Internet skills ¹					
Before training	9.2	31.6	38.3	16.0	3.3
After training	19.8	60.3	17.7	0.8	0.0
2. Usefulness of the workshop on database research ²	30.8	45.5	15.5	3.7	2.5
3. Usefulness of the workshop on researching the Internet ²	21.5	48.5	19.4	3.3	2.9
4. Agreement that the training booklets were helpful ³	24.8	50.2	21.0	1.2	0.8
5. Agreement on relevance of skills in study & professional work ³	47.2	40.9	8.8	1.2	0.0
6. Rating of the overall contents & quality of the workshops ⁴	18.9	54.0	22.3	3.7	0.0

¹ Excellent=5, Good=4, Average=3, Inadequate=2, Non-existent=1

² Essential=5, Useful=4, Neutral=3, Not very useful=2 Unnecessary=1

³ Strongly agree=5, Agree=4, Neutral=3, Disagree=2, Strongly disagree=1

⁴ Excellent=5, Good=4, Satisfactory=3, Poor=2, Very poor=1

Table 1: Percentage distribution of responses to selected online questionnaire items

Overall, the students found the workshops on database and Internet researching to be essential or useful (Table 1, Items 2 & 3). Further analysis of the application of skills to their learning revealed that after the workshops on online database training, 99.1% of students reported having used the Library databases (e.g., ERIC, Australian Education Index, PsychINFO) and subsequent to the workshop on Internet researching, 73.4% reported having used a search engine e.g., Yahoo, Google, BUBL, or directories of e-journals. Most importantly, 74.6% of the students agreed or strongly agreed that after such training, they could evaluate material found on the Internet for scholarly content and suitability for use in assignments, with strong agreement that the skills they developed were relevant for further study and professional development (Table 1, Item 5); indeed, nearly 75% rated the workshops as being good or excellent in overall contents and quality (Table 1, Item 6).

These preliminary results strongly suggest that the integration of information literacy within a relevant and immediate learning experience has been successful as indicated by 98% student satisfaction or better rating of the unit overall, and 96% satisfaction or better rating of the Library workshop components. The preliminary GIST evaluation results strongly suggest that the integration of information literacy into unit assessment tasks has elicited positive learning outcomes, as well as being viewed as being necessary and valuable learning experiences by the students.

In 2001

Despite the success suggested by the 2000 results, one prominent theme that emerged from the student evaluations was that the tutorial time spent in training at the Library was at the expense of scaffolding necessary for the unit content, learning processes and assignments. As Bruce (1998) points out, information literacy must not lose its relational approach; its acquisition should not necessarily displace learners' support needs in acquisition and consolidation of basic course content and conceptual knowledge and understanding. In 2001, the second year of the project, there has been the opportunity review and modify the program in light of such feedback. As a result of GIST, the information literacy training offered by the Library is now presented as an online, self-paced, self-assessed learning module that can be tailored to the needs of different disciplines and learner groups on offer to all Macquarie students and staff.

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