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Information Literacy Integration: Maintaining relevance in the Business classroom

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Abstract

Information literacy is essential for students; a key to lifelong learning. This study reviews the integration of information literacy skills into a postgraduate consumer behaviour class. Findings show that librarians should be part of a collaborative framework with teaching staff to engage in learning programs that develop the information literacy skills of business students.

Introduction

Information literacy is a keystone of lifelong learning. Effectively integrating information literacy skills into business curriculum requires the development of partnerships between teaching staff and librarians. It is no longer just an issue for libraries. The need for tertiary students to acquire and develop information literacy skills has become more important in recent years within universities.

The change in educational thinking and the tremendous technological developments bring new challenges to universities and libraries. Incorporating librarians into learning programs can teach students' generic information literacy skills, while emphasising good learning principles and the fundamental skills of how to use information correctly.

At the Queensland University of Technology (QUT), the QUT *Information Literacy Framework & Syllabus (ILF & S)* was endorsed in 2001 as guiding policy for the University and sits with the University Learning & Teaching Plan 2005-2010. QUT Library uses the *Australian and New Zealand Information Literacy (ANZIL) Standards* as the basis for embedding information literacy into the design and teaching of educational programs. Information literacy has developed as a premium agenda within the university community, as documented by Judith Peacock, the university's Information Literacy Coordinator (Peacock, 2002a).

While librarians realise the importance of information literacy, academics have debated the meaning and significance (Cunningham and Lanning 2002). However, the problem remains within many universities: students need to learn how to find information using library resources. This was the underlying reason for our study. We wanted to determine if any librarian intervention and instruction specifically on information literacy skills made a difference to students' knowledge level from the beginning of semester to the end of semester.

This paper outlines the literature regarding information literacy within business schools, the methodology, and the research question which discovers findings that relate to a pre and post test of students' knowledge. Conclusions and future research are recommended to conclude the paper.

Literature review

Universities role to assist students to become more information literate has been increasing in attention (Feast 2003; Ondrusek et al. 2005; Wu and Kendall 2005). Information literacy is “the capacity to recognise the need for information, and then identify, access, evaluate and apply needed information. An information literate person is a person who has learned how to learn” (Bundy 2002).

Common themes contained within the literature regarding information literacy comprise how to recognise, find and use information; how to evaluate and apply found information; understanding the purpose of information and organising information. Our review focuses on students’ need regarding how to find and use information within the library setting (either online or within the library).

It is well known that librarians can help students critically evaluate information sources, especially after consultation with teaching staff (Wu and Kendall 2005). Further, when teaching staff in collaboration with librarians incorporated library skills training, students used better quality resources as well as improved their research skills (Atkinson and Figueroa 1997).

Furthermore, it is of importance to develop generic skills within students in perspective to technology and information, focusing on critical skills, autonomy, context and participation (Whitworth 2003). Making use of technology and a complex information environment can enable students to become self-empowered with a new learned set of skills (Wallis 2005) to become independent and lifelong learners.

Students often apply the “Principle of least effort” (Zipf 1949), which is when they will choose ready and easily available sources, even if they are of low quality. They are satisfied with whatever can be found, rather than engaging in higher quality publications, which would require spending greater effort (Mann 1993).

Assessment can be used to achieve educational improvement (Michlitch and Sidle 2002), while having the intervention of business librarians allows evaluation of assessment, and addressing methods to improve research techniques (Judd et al 2004). Further, students engage in a more meaningful development of information literacy skills when the skills are directly relevant to course assessment (Feast 2003).

The main accreditation agency for Universities, AACSB International has announced standards for all business teaching criteria, which includes a guide to improving critical thinking, which is an essential part of information literacy. The university wide information literacy program promotes critical thinking and equips students for lifelong learning (Peacock, 2002b) In this research, a key assignment encouraged students to gain greater knowledge in information literacy skills (Palomba and Palomba 2001). Further, this assignment was the basis for the librarian’s instruction.

Methodology

The population for the study was students enrolled in the postgraduate unit Consumer Behaviour, at Queensland University of Technology in Semester 1 2006. The

assessment piece has proven challenging to students in past years. Therefore we wanted to determine if any information literacy instruction and intervention took place, did this affect knowledge? Results were analysed, t-tests were performed to detect any significant differences between the pre and post tests.

This research specifically targets graduate students. This research asks: *Does graduate student knowledge change if any information literacy intervention takes place within the semester?*

To answer this question, data sets from graduate students were collected. The pre test was conducted in week two, and the post test was conducted in week 9. A further question asking students whether specific intervention was beneficial to them was included using a Likert scale.

A number of the variables on the questionnaire were borrowed from the PILOT: Online Information Literacy Tutorial which provides undergraduates with the skills and tools to find and manage information effectively. <http://pilot.library.qut.edu.au/>.

Results

The pre-test yielded 74 responses, and the post test, 64. Results on the survey did not show a positive response with eight questions showing a negative change and five questions gained a positive result from the pre and post test.

Table 1: Results between pre and post information literacy test

Question topic	Pre-test % correct	Post-test % correct	Post – Pre difference (% gain)	Significance
1 – locating a reference in library catalogue	28.4	23.4	-5.0	0.28996
2 – best way to find scholarly journal articles	68.9	85.9	17.0	0.137265
3 – search strategy to retrieve smallest results	39.2	46.9	7.7	0.254115
4 – database search	70.3	60.9	-9.4	0.256475
5 – limiters for database search	71.6	57.8	-13.8	0.16622
6 - periodical	25.7	73.4	47.7	0.00027
7 – database search	54.1	31.3	-22.8	0.02319
8 – search strategy	44.6	46.9	2.3	0.424265
9 – referencing	67.6	59.4	-8.2	0.281015
10 – refereed journal	43.2	78.1	34.9	0.00503
11 - scholarly journal	50.0	46.9	-3.1	0.401155
12 – copying material	17.6	48.4	30.8	0.0011
13 - plagiarism	50.0	28.1	-21.9	0.0227
14 – key concepts	14.9	4.7	-10.2	0.03165

The extra question in the post test wanted to gain insights determining if the librarian's instruction regarding information literacy skills had made any difference to students. It was felt that these were the main reasons for librarian interaction. A 7-point Likert scale was used using anchors ranging from strongly agree (1) to strongly disagree (7).

Table 2: Extra questions on post-test regarding specific information literacy skills

1	2	3	4	5	6	7	Concept	Mean
5	12	26	5	3	1	1	Search strategy design	2.93
8	9	24	10	1	2	1	Techniques to refine our search (eg truncation)	2.93
11	8	17	14	2	1	1	Using the Boolean operators (AND, OR, NOT)	2.91
8	15	18	10	1	0	1	Using the library catalogue	2.72
7	15	17	10	4	0	1	Identifying and using business databases	2.87
7	12	20	10	2	1	2	An overall and general understanding of library information search strategies	2.98
14	14	17	13	2	3	1	Now that you have completed your assignment, do you feel more confident about searching within databases and the library	3.06
3	12	16	14	8	0	1	Now that you have completed your assignment, do you feel more confident about recognising good, scholarly journals	3.30
2	9	23	15	2	2	1	Now that you have completed your assignment, do you feel more confident about referencing	3.30
1	6	18	17	6	2	3	The 3 R's of the search strategy process: record, reflect and refine	3.74
66	112	196	118	31	12	13	TOTALS	

Discussion

The purpose of this research was to determine if student knowledge changed between week 2 and week 9, via information literacy intervention from a librarian. Findings reveal that it did, however not in expected areas. We expected to see a positive change from pre to post test in areas such as search strategy and database search strategies. While search strategy gained a positive result, it was only 2.3%. Both limiters for database search (5 in Table 1) and database search (7 in Table 1) were an incredible -13.8% and -22.8% respectively. This shows that students did not grasp those aspects of the librarians intervention and presentation.

Results for the extra question that was asked specifically to determine what students liked about the librarians presentation found that all aspects were very positive. Specifically, the majority of students agreed (#3 in Table 2) with most categories, showing 196 responses in total. The majority of students knew the content already (category 4 in Table 2), and agreed, slightly or strongly agreed (categories 1-3 in Table 2). The means range from 2.72 to 3.74, which again shows ranges of slightly agree to agree. The greatest amount of disagreement in any category was the final question, which asked about the three R's of the search strategy process, which gave 11 responses, which was 20.4%. Also 16.7 percent disagreed that, 'Now that you have completed your assignment, do you feel more confident about recognising good, scholarly journals?' Although the questions in the test found that 34.9% knew about refereed journals.

The questions that yielded the greatest amount of agreement were question 2, 'Techniques to refine our search (eg truncation)?' and question 4, 'Using the Library catalogue' with 94.4% of respondents either neutral or in agreement for both

questions. However, all questions ranged between 79.2% (three R's question) up to 94% for agreeing that librarian intervention was beneficial. These are presented in Table 2.

Conclusions

This study has provided an opportunity to establish information literacy goals and objectives within a postgraduate classroom and assessment. Specifically, we wanted to know how much knowledge was gained from an instructional experience.

Based on our research findings, we recommend that to acquire the necessary information literacy skills to develop and increase a student's knowledge base, librarians and teaching staff can work collaboratively to develop tools and lecture plans to meet expectations and achieve goals. Information literacy skills can be successfully integrated into subjects to prepare students for lifelong learning and the real world of work. However, many opportunities and challenges exist, as shown from this research. In areas where we expected to see a positive change, in fact gave us a negative result. Overall, more negative changes resulted from the post test.

Implications for theory and practice

Information literacy skills acquired at University can improve student's success and can lead to lifelong learning in many facets of working life. Incorporating literacy skills into class, which includes collaboration from business librarians, can greatly improve students' knowledge of literacy skills.

Lifelong information literacy skills were one of the hallmarks of Drucker's research. Drucker (1995) looked at the need for business strategy being based on information from many sources. Not only this, but information should allow executives to question assumptions and integrate this information into making decisions.

Future research

The complex information environment that students have to work within presents them with great challenges. This study has recognised the challenge that students face when interacting with new information technologies that exist within the information environment. We believe that by investing time in information literacy for students is of great benefit to them in the long term.

Specific issues that need to be addressed for future classes are: considering the timing between the first librarian presentation, and the offering of a second librarian presentation, with the provision of a hands-on electronic searching exercise when students are better prepared. Furthermore, revising instruction to improve competency in problematic areas, and developing assessment tasks in collaboration with librarian specialists (Hiemstra 2002).

Information literacy is an ongoing journey; it should not be considered a destination (Cunningham and Lanning 2002).

References

AACSB International (2006), Eligibility Procedures and Accreditation Standards for Business Accreditation, Tampa, FL, available at: <http://www.aacsb.edu/accreditation/standards.asp>

Atkinson, J.D. and Figueroa, M. (1997), 'Information seeking behaviour of business students: a research study', *Reference Librarian*, no 58, pp. 59-73.

Bundy, A. (2000), 'Information literacy: the foundation of lifelong learning,' paper presented at the Lifelong Learning Annual Conference of the South Australian Association of School Parents' Clubs (SAASPRC), 15-16 August.

Cunningham, T. and Lanning, S. (2002), 'New Frontier trial guides: faculty-librarian collaboration on information literacy. *Reference Service Review*, vol 30, no. 4, pp. 343-348.

Feast, V. (2003), 'Integration of information literacy skills into business courses', *Reference Services Review*, vol 31, no. 1, pp. 81-95.

Hiemstra, K. M. (2002), 'Library-based assignments that enrich the business communication course', *Business Communication Quarterly*, vol. 65, no. 3, pp. 81-6

Judd, V., Tims, B., Farrow, L. and Perriatt, J. (2004), 'Evaluation and assessment of a library instruction component of an introduction to business course: A continuous process', *Reference Services Review*, vol. 32, no. 3, pp. 274-83.

Mann, T. (1993), *Library Research Models: A Guide to Classification, Cataloging, and Computers*, Oxford University Press, New York.

Michlitch, J. and Sidle, M. (2002), 'Assessing student learning outcomes: A comparative study of techniques used in business school disciplines', *Journal of Education for Business*, Jan/Feb, pp. 125-30.

Ondrusek, A., Dent, V., Bonadie-Joseph, I. and Williams, C. (2005) 'A longitudinal study of the development and evaluation of an information literacy test', *Reference Services Review*, vol 33, no. 4, pp. 388-417.

Peacock, J. (2002a). 'Reinventing the Reference Librarian: Information Literacy as a change agent'. Paper presented at the ACURIL XXX11: the new librarian.com. Jamaica Grande, Ochos Rios, Jamaica

Peacock, J. (2002b). 'The QUT Information Literacy Framework and Syllabus: Walking the talk.' Paper presented at the Lifelong Learning Conference, Central Queensland University, Yeppoon, Queensland.

Palomba, N.A. and Palomba, C.A. (2001), 'Assessment of student competence in business', in Palomba, C.A. and Banta, T.W. (eds), *Assessing Student Competence in Accredited Disciplines*, Stylues, Sterling, VA, pp. 121-39.

Wallis, J. (2005), 'Cybersspace, information literacy and the information society', *Library Review*, vol. 54, no. 4, pp. 218-222.

Whitworth, D. (2003), 'IT education and democratic practice', *Tangentium*, vol. 1, no. 1.

Wu, Y. D. and Kendall, S.L. (2005) 'Teaching faculty's perspectives on business information literacy', *Reference Services Review*, vol 34, no. 1, pp 86-96.

Zipf, G.K. (1949), *Human Behavior and the Principle of Least Effort: An Introduction to Human Ecology*, Addison-Wesley Press, Cambridge, MA.