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Information management courses in Australia: what do they teach?

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Abstract

Examines the nature and content of Information Management courses currently offered by Australian universities, through an analysis of subject abstracts taken from the courses' web pages. A lack of overlap between course content indicates the heterogenous nature of IM education and that courses may have had different disciplinary origins. On the other hand, the courses broadly conform to Gorman and Corbitt's model of core competencies for IM, which represent the intersection of LIS and IS approaches. This suggests that despite differences in the details of syllabi, there is a common understanding amongst Australian academics that IM education should cover key middle ground between systems-based and user-based fields of study.

Keywords

Information management, education, courses, Australia

Introduction

The fact that Australasian Conference on Information Systems now has an Information Management (IM) track demonstrates the close relationship information systems (IS) and IM, to the extent that IM is sometimes considered as part of IS. On the other hand, IM is also claimed by many based in the field of Library and Information Science (LIS). After all, librarians do not simply manage libraries; many spend much of their working lives managing information, or at least resources containing information. The multiple claims on the IM field are shown by the way the term 'Information Management' is included in the names of a wide range of courses offered by universities in Australia and elsewhere. LIS courses are sometimes called 'Library and Information Management', IS courses are sometimes called 'Information Systems and Management', and so on. In recent years, IM programs have started to emerge as courses in their own right. This paper examines the nature and content of these IM courses, as offered by Australian universities.

Literature Review

According to Felicite Fairer-Wessels (1997), information management emerged as a specialised field of university education in the late 1980s, with debate 'focusing on the particular disciplines within which information management should be tutored.' For a considerable time, the content and scope of IM programs have received close attention from practitioners and researchers from a variety of fields, including the areas of 'business and management, organisation research, information systems, information and communication technology, public administration, communication, information, and librarianship' (Maceviciute 2002, p.191). The emergence of knowledge management (KM) over the past decade has renewed interest in this issue (Kirk 1999; Davenport & Prusak 2000; Maceviciute 2001; 2002).

Although IM, or IRM (Information Resources Management) as it is also known in the USA, has been around for many years and there are now many academic programs described as Information Management, there are still definitional problems, with the concept taking on 'different meanings for different people' (Fairer-Wessels 1997). Maceviciute (2001) summarises the approaches taken to IM by researchers and practitioners from various fields as follows:

The LIS representatives advocate stronger orientation towards the perspective of management in new flexible organisations and use of technology in them. In the business field information management is seen as a higher management level function, especially when it is labelled as knowledge management. It is normal to find information management programmes in business and management schools. Moreover, computer professionals, information systems

(IS) designers, and information technology (IT) specialists for businesses start worrying more about the necessity to study how managers utilise information.

According to Maceviciute (2001; 2002), the term information management has been used to describe discrete fields such as IT management, IS management, management of information and information resource management.

While IRM is often used synonymously with IM, it can also be used to describe a subject or module within the IS curriculum, designed to 'introduce students to the concepts and terminology of the management of information resources' and covering area such as IT policy, and the 'methodology of strategic planning' as applied to an IT function (Farah 2002, pp.107-108). Similarly, Barbara Klein (2002) describes an IM subject within an MBA non-IT major that covers topics such as data modeling, database design, data definition and manipulation languages, database administration and data warehousing. On the other hand, both IM and IRM have been used more broadly, to describe the IS field of academic study (Gorgone et al. 2003).

For some authors, IM represents 'the merging of the business and the technical areas together to develop a hybrid manager' (Grant et al. 2001, p.360). In Britain, this approach to IM generated a variety of Business Information Management and Business Information Technology programs, 'all of which appear to be focused in the "new" university sector' and are intended largely to produce 'graduates with knowledge and expertise in both business/managerial areas as well as IT and its applications' (Grant et al. 2001, p.361). Similarly, Gorgone et al. (2003, p.7) suggest that the IS curriculum needs to cover four principal areas: a 'broad business and real world perspective', 'analytical and critical thinking skills', 'ethical principles and ... interpersonal communication and team skills' and design and implementation of 'information technology solutions that enhance organizational performance'. Some of the IS programs reviewed appear to meet this market need for 'hybrid managers' who understand both business and technical aspects of organisations. However, IS education has also been criticised in the past for tending to 'focus on technical skills rather than managerial skills' (Whiddett, Jackson & Handy 2000, p.165). In a comparison of Computer Science (CS), IS and IT programs in the USA, Han Reichgelt et al. (2004, p.28) distinguish IS from CS and IT programs, with 'business' constituting by far the largest component of the IS programs reviewed, although this covers generic subjects such as project management as well as 'business content' subjects such as finance (2004, p.32).

Not surprisingly, the literature suggests that no single IM curriculum has emerged so far. Jennifer Rowley and Frances Stack (2000, p.276) refer to the emergence of 'two distinct, and barely connected literatures on the nature of information management curricula and competencies: those owned by information systems professionals, and those owned by information management or information professionals.' It is also worth noting John Shinebourne's comment (1995, p.37) that '[h]istorically, those engaged in librarianship, information science and business computing, have studied within different paradigms and worked in organizational contexts in which there was little interest in developing common theories'. A few years ago, in a comment on the merger of the schools of Information Systems and Library, Archives and Information Studies at the University of New South Wales, Meliha Handzic and Paul Scifleet (2002, pp.9-10) stated: 'Despite the inherent similarities between the disciplines of Information Systems and Librarianship until recent times there had been remarkably little interaction between the practitioners.' In a review of curricula in British, Baltic and Nordic LIS schools, Maceviciute (2002, p.198) sees three types of IM program: 'classical' LIS programs 'based on the processes of knowledge organisation, information retrieval, provision of information services to the user', those 'focused on management, business or economics with strong emphasis on the information tasks, information resources and the information role in management with modules in computer information systems analysis and design', and programs 'oriented towards education of information managers understanding strategic goals of various institutions and organisations'.

In Britain, however, it is also suggested that the multi-disciplinary nature of IM has been turned into a strength 'by promoting IM as a discipline which is highly flexible in addressing the diverse needs of the information profession', a strategy that 'has been possible thanks to modularisation, where degree structures with core (ie compulsory) and optional subjects are clearly identified so that the choice of career is left entirely to the

students' (Hornby & Andretta 2001, p.43). Writing from a South African perspective, Fairer-Wessels (1997) pointed out that her

empirical fieldwork with university academics indicates a movement towards an integrated inter- and transdisciplinary approach of IM curricula to address the fragmented and multidisciplinary status of IM which has resulted in overspecialised perspectives of IM. These findings correlate with the literature and their implications would indicate that the responsibility for the development of a holistic perspective and integrated approach to university curricula in IM would lie in the hands of university academics as educators.

More recently Gary Gorman and Brian Corbitt (2002) interpret IM as an integrative – if imprecisely defined – ‘meta-discipline’ that encompasses the competencies of separate LIS and IS disciplines. They draw on J.S. Downie’s notion (1999) that, in view of the ‘disintermediation’ of the LIS professional’s role in recent years, the predominant ‘user-centred, librarian focused’ approach to LIS education in the USA, as in Australian and New Zealand, should make room for the alternative ‘system-centred, technology focused’ approach. Gorman and Corbitt (2002) suggest that IM education can be the means by which these two approaches are combined. Whether this is in fact happening in Australia, is the subject of the study described below.

Information Management Courses in Australian Universities

While information management, as an independent profession, may still be undergoing development in Australia, formal courses of IM are now offered by a number of Australian universities. Some courses combine IM with cognate disciplines, such as LIS, KM and IS, mostly in an integrated fashion so as to offer a generic award, e.g. ‘Master of Applied Science (Library and Information Management)’, rather than a specific information management stream. Other courses cover narrower facets of IM, such as business or health information management, records management, and web management or information architecture. However, there are also around a dozen courses which are straight ‘Information Management’, and it is these courses that form the basis of the following analysis.

It might be supposed that as no professional body for IM has as yet established a system of formal recognition for IM courses in Australia (the Institute of Information Management (of Australia) was only established a few years ago), the curricula of these courses may be quite disparate. On the other hand, the related profession of knowledge management has no curriculum watchdog in Australia either, and yet would appear to be well-enough established for its courses to overlap to a greater degree (Ferguson & Hider 2006). Further, there are bodies which formally recognise courses that cover particular subdisciplines of IM: the Records Management Association of Australasia for records management, and the Australian Society of Archivists for archival management. Some, though not all, of the ‘IM’ courses are recognised by these two bodies. Moreover, the Australian Library and Information Association (ALIA) would claim responsibility to the IM profession in Australia, and most IM courses are formally recognised by this well-established body. There are also IM courses recognised by the Australian Computer Society (ACS). Whether these multiple sources of recognition, from bodies representing different disciplines and subdisciplines, assist in unifying IM education in Australia, or have the opposite effect, is a question addressed in this study.

Ten courses, currently offered by Australian universities, were identified with the specific title of Information Management: one undergraduate program from Monash University; two graduate certificates from Central Queensland University (CQU) and Queensland University of Technology (QUT); four graduate diplomas from RMIT, the University of Tasmania, the University of Technology, Sydney (UTS), and the University of Western Australia (UWA); and three masters from Curtin University of Technology, QUT, and UWA. For the purposes of this analysis, articulated courses (e.g. where both a graduate diploma and masters are awarded) are treated as single courses, classified according to the highest award. The QUT graduate certificate combined information and knowledge management in its title.

A content analysis was performed on the abstracts for the core (compulsory) subjects, as derived from the course web pages, in seven of the ten courses. The undergraduate program was not analysed, as there was no other programs at that level for comparison; nor were the Curtin and UWA masters programs, as neither course

had a single set of core subjects (the Curtin program had core subjects for different streams, e.g. Library and Information Studies). The analysis set out to answer three key questions:

- (i) do the IM courses cover similar ground?
- (ii) what areas or competencies do the courses focus on?
- (iii) to what extent do the courses represent a mix of competencies derived from the curricula of other disciplines?

The first question was addressed by examining overlap amongst subjects from different courses. The second and third questions were addressed by classifying all the core subjects from the diploma and masters courses in two ways: first, according to whether a subject was clearly derived from the LIS or IS discipline, or not; second, according to which of the core competencies for IM, as identified by Gorman and Corbitt (2002), a subject most covered.

In order to compare the overlap between courses, the courses were grouped at the same level. That is, six courses were examined for overlap: the two graduate certificates on the one hand, and the four graduate diplomas on the other. The same basic assumptions were made as in the authors' earlier study of KM courses in Australia (Ferguson & Hider 2006): that the graduate certificate and diploma levels are commensurate across the universities; that the abstracts for the subjects are sufficiently accurate and detailed to allow for accurate classification; and that despite varying specificity and exhaustivity in the abstracts, and varying subject divisions across courses, there would be some *subject equivalency* across courses, if the course content is to overlap significantly. For this analysis, subjects are deemed equivalent if there appears to be a large amount of overlap between them, such that a student would be considered eligible for recognition of prior learning. Subjects that did not comprise specific content – project subjects, practicums, etc. – were not examined in this analysis.

Each number in the table 1-3 represents a particular subject, corresponding to the list of subjects in the Appendix. Table 1 shows core subject equivalency – or lack of it – between the two certificate courses at CQU and QUT. With only two courses, and a small number of subjects, few conclusions may be drawn. More interesting is the level of subject equivalency between the diploma courses. Table 2 shows core subject equivalency between the four courses at RMIT, Tasmania, UTS and UWA. As the number of subjects varies across courses, a fairer analysis allowed subject equivalency to be collapsed, so that narrower subjects are equated with broader subjects. However, this only applied to the case of one set of subjects, namely those covering information architecture, or a facet of information architecture. Table 3 shows the adjusted results: on average, a core subject in a diploma course was equivalent to 0.9 of a subject from the other three courses – a 30% overlap (0.9/3). This is low in comparison with the 50% overlap found between the KM masters courses by Ferguson and Hider (2006), and indicates that the curricula of the IM courses do not have all that much in common.

Table 1 : Subject equivalency in IM certificate courses (numbered as per Appendix)

CQU	1	2	3		
QUT				4	5

Table 2 : Subject equivalency in IM diploma courses (numbered as per Appendix)

RMIT	6	7	8	9	10	11	12							
UWA								13	14	15				
Tasmania	18			19					17		16	20	21	
UTS				25	22									23 24

Table 3 : Collapsed subject equivalency in IM diploma courses (numbered as per Appendix)

RMIT	6	7	8	9	10	11	12						
UWA								13	14	15			
Tasmania	18			19		20			17		16	21	
UTS				25	22	24							23

The subjects in the four diploma courses, plus those in the masters course from QUT, were then classified according to ‘discipline’ and ‘core competency’ (a couple of subjects could not be categorised due to lack of information). Results are shown in tables 4 and 5. Only subjects with abstracts that demonstrated to the authors a clear bias towards LIS or IS were classed with that discipline; otherwise, the ‘neutral’ category was assumed (see table 4). The core competency array (see table 5) was based on Gorman and Corbitt’s three common competencies (‘management’, ‘technology utilisation’ and ‘organisation of knowledge and knowledge resources’, in LIS terminology) that represented (to Gorman and Corbitt) the intersection of IS and LIS, namely IM, and the two competencies that were outside that intersection (‘information mastery’ and ‘client needs and services’). A subject that could have been classed in more than one category was classed according to what was considered best fit. Two subjects could not be classed with any of the above five competencies, and so were classed separately.

Table 4 : Discipline orientation of core subjects (numbered as per Appendix)

	RMIT	UWA	Tasmania	UTS	QUT
IS			17,21		26
<i>neutral</i>	6,7,10,11,12	13,14,15	16,20	22,23,24,25	29,30,32,33,34
LIS	8,9				27,28,31

Table 5 : Core competency classification of core subjects (numbered as per Appendix)

	RMIT	UWA	Tasmania	UTS	QUT
Management	8	14	16,17,21		28,32
Technology utilisation		15			26,29
Organisation of knowledge and knowledge resources	7,9,11	13	19,20	24,25	30,33
Information mastery	6				
Client needs and services	10			22	27,31,34
Professional practice	12				
Information behaviour				23	

Assuming that subjects cover similar proportions of a (core) course, it would appear from table 4 that IM courses in Australia are making a fair attempt to offer more than an IS or LIS course. A large majority of subjects are not conspicuously derived from outside of IM, and no course has more than half its core subjects outside of IM. The most IS-oriented course appears to be the graduate diploma offered by the University of Tasmania, while the most-LIS oriented course looks to be QUT's masters, though this also has an IS-oriented subject and several neutral ones. Overall, the levels of IS and LIS influence would seem quite similar. The findings summarised in table 5 also indicate that the content of the IM courses is genuinely IM-oriented, if we

accept Gorman and Corbitt's view of IM's core competencies – most subjects fitted reasonably well into one of the three 'IM' competencies. However, the extent to which courses conformed to Gorman and Corbitt's model varied significantly: the subjects from Tasmania and UWA were exclusively of the three 'IM' competencies, whereas half or almost half of the subjects from UTS and RMIT fell outside of them. Not surprisingly, the two more LIS-oriented courses included one or more subjects which focused on client needs and services. Of the three 'IM' competencies, it is interesting to note that the most covered, in terms of subjects, is organisation of knowledge and knowledge resources, followed by management. Technology utilisation, perhaps surprisingly, comes a poor third. Indeed, the RMIT, Tasmania and UTS courses include no subject that focuses on technology; whereas the UWA and QUT courses are well-balanced in terms of the Gorman and Corbitt core competencies.

Conclusion

The low degree of overlap amongst the content of the IM courses may be due to a combination of reasons, some pragmatic (for example, schools endeavouring to develop 'unique' courses for strategic purposes) and some pertaining to the nature of IM as practiced in contemporary Australia. One reason may well be that the courses are derived from other courses based in different disciplines and professions; a related reason may be that they are aimed at different accrediting bodies and at students with different career aspirations. It may also be the case that IM is simply not well enough established in Australia as a distinct discipline, and as such is variously constructed by academics based in a range of *other* disciplines.

On the other hand, at a meta level, the IM courses appear to conform reasonably well to the model of IM professional attributes, or core competencies, proposed by Gorman and Corbitt (2002). That is, the courses tend to focus on information/knowledge organisation, management, and technology applications. If content has been derived from IS or LIS courses, then it would appear to have been selected appropriately, for the most part, and to have been adapted for an information management perspective. Whilst the details of what information management covers, or should cover, may be contested, its position in relation to other disciplines would appear to be reasonably well-established: it represents an intersection of IS and LIS, and also of KM.

The courses' emphasis on information organisation is interesting, as is their de-emphasis on specific technology applications, at least with their core subjects. It may be that technology is covered more extensively in the elective subjects, and it may be the case that information organisation and management can be taught more readily in terms of principles than can technology, which is covered more in terms of specific applications taught outside of core curricula.

Further research is required to gain a fuller picture of the directions in which IM education in Australia, and elsewhere, is heading. Presently, IM represents an intersection, rather than a union, of the LIS and IS disciplines, as reflected in the separate LIS and IS programs that continue to operate quite independently in Australia. If IM courses are to assist in the unification of these two disciplines, then it needs to be demonstrated not only that their graduates are successfully combining LIS and IS competencies, but also that this combination of skills and perspectives is becoming the expectation, rather than the exception, on the part of a broad range of industries.

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Appendix

Names of core subjects

1. Systems Management Overview
2. Scholarly Information Sources
3. People, Work & Organisations
4. Knowledge Management
5. Managing Knowledge in Learning Organisations

6. Information Provision 1
7. Document Management 1
8. Information Centre Management
9. Information Organisation in Libraries
10. Information Provision 2
11. Document Management 2
12. Professional Issues and Practice
13. Data Analysis and Decision Making
14. Information Management
15. Electronic Marketing Units
16. Business Information Management
17. Strategic Planning and Management for IS
18. Information Resources and Services
19. Information Organisation
20. Managing Websites
21. IS-based Knowledge Management
22. Discovering and Accessing Information
23. People, Information and Knowledge
24. Information Architecture and Design
25. Organising Information
26. Enterprise Architecture
27. Information Retrieval
28. Management Issues for Info Professionals
29. Organisational Databases
30. Information Organisation
31. Information Services
32. Information Management
33. Web Content Reliability
34. Information Literacy Education

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