

3. Methodology

3.1 Literature Search

An initial search for literature was conducted via the Aberystwyth University Voyager OPAC, Google UK, and a number of online bibliographic resources including: Library and Information Science Abstracts (LISA) via CSA; and OCLC FirstSearch. The first searches were for the phrases 'information management' and 'information manager' as keywords, which unfortunately resulted in a number of returns well into the thousands. Where possible the search for these phrases were then restricted to the title, and then further restricted to a time frame of 1997 onwards, to try and ensure the concurrency of any returned results. Searches via the bibliographic databases were then refined to 'information management/ manager' as title phrases, with terms including 'definition,' 'discipline,' 'curricul*,' 'education' and 'profession' as keyword searches. These keyword terms were also combined with those of 'information/ library studies,' 'librarianship,' 'knowledge management,' and 'information profession,' to ensure total saturation of searches around the investigation topic area. A search for the phrase 'content analysis' as a keyword with 'information/ library studies,' 'librarianship,' and 'information profession' was also conducted, to retrieve any relevant studies that had utilised the research method or described its use within the subject area.

The references of some of the retrieved texts and documents provided a 'snowball' effect in terms of finding other suitable resources for the study. Although, some of these primary texts were from before 1997 it was thought suitable to include them as they either, provided a historical perspective on the topic, or were the original source of particular knowledge. Serendipity also played a role in locating resources, with relevant articles appearing in the same journal volume, or monographs being located within similar classmarks as the originally retrieved item.

3.2 Chosen methodology

Content analysis was deemed to be a suitable method for this study as its effective use in the consideration of HE IM degree course components has been demonstrated by Ellis et al. (1997), Hawkins (2000) and Widén-Wulff et al. (2005). Similarly, there have been a number of studies which have used this research method to determine the nature of, and skills required within, information work through the analysis of job advertisements, including Cutting (2002), Heimer (2002) and Orme (2008). Content analysis is an approach to the analysis of documents and texts, that seeks to quantify content in terms of predetermined categories, in a systematic and replicable manner (Bryman, 2008, p. 274). It is a cost-effective, flexible method that can be applied to a wide variety of media. It is unobtrusive, and as the method does not involve the interaction of participants with a researcher, it can also be considered as non-reactive. (Berg, 1995; Neuman, 2006; Bryman, 2008).

Surveys and interviews with academic and professional representatives are other research methods that have been utilised in previous studies, such as those which have considered the suitability of information course content to provide graduates with the requisite skills to effectively perform information roles (Cronin et al., 1993; Blankson-Hemans & Hibberd, 2004; Stephens & Hamblin, 2006). However, these methods were not deemed appropriate for this study as it is an objective overview of what constitutes IM in the UK which is sought by the investigation, rather than the subjective opinion of individuals on the topic. Constraints in time and resources also made content analysis a practical choice in research method for the study.

3.3 Samples for analysis

3.3.1 Courses

Reviewing the literature showed that the curriculum of HE degrees constituted the knowledge base of both a profession and the discipline that it practised. Therefore, to understand what is recognized as IM in the UK, the content of HE degrees in the subject were analysed. A table of courses considered in the study is available in Appendix I.

3.3.1.1 Search for courses

Both the UCAS and Prospects websites were searched for degrees entitled 'Information Management'- UCAS for undergraduate degrees, and Prospects for postgraduate degrees. Courses considered within the study were located by using the sites' 'subject search' options, with UCAS offering an 'Information Management' subject search, and Prospects offering a subject search for 'Information and Library Management.' Degrees with the title of IM listed within the Prospects website but deemed by their classification to be outside of the IM subject area, were not considered in the sample as it was felt they may lend themselves to IM of a specific subject, for example Business IM.

3.3.1.2 Selection of an appropriate sample

Only single- honours courses and courses with the explicit title of IM were considered. Courses that offered joint, or major/ minor study of IM, with another subject were not included as it was thought not possible to distinguish the modules and components of the course that represented IM, over those which represented the other subject. For the same reason, course titles that indicated a joint subject focus, such as 'Library and Information Management' were also not included in the sample. It was felt particularly pertinent not to include titles which indicated a KM or RM element as differentiation between IM and these disciplines has been noted as being difficult. As the study was

concerned with the broad representation of IM rather than all its possible derivations, titles that indicated a focus on a specific form of IM such as 'Health Information Management,' were also not included. The sample did not include higher research, or research preparation programs, as it was thought the strong impetus to research within these courses would be misrepresentative to the IM discipline as a whole. One course, identified as a Continuing Professional Development degree, was included in the sample as it was thought to still represent the IM discipline and profession although aimed for a different type of candidate than the other degrees.

To allow a contemporary view of IM to be considered the sample was limited to courses running in the academic year of 2007- 2008. Where the course ran for more than one academic year, it was the modules that were running in 2007- 2008 for subsequent study years that were considered. Information regarding course structure, and the particulars of degree modules, were obtained via the relevant institutions' websites, and clarification was sought on particulars, where necessary, from the courses' admissions tutors. Unlike Hawkins (2000), it was found that the most current information regarding a course was available via an institution's website, and on the whole, information regarding the content of modules was not contained within the promotional course brochures. This may reflect developments in the use of the internet as a contemporary marketing tool for universities over the more traditional print materials.

In all cases, the modules considered were those which were to be followed in order to attain the highest qualification achievable within each particular course. Industrial year placements, along with any modules relating to such placements, were only considered if strongly recommended as part of the course. It was the full-time delivery option of a course which was considered in the study, as it was found that where offered by a

University, part-time or distance learning delivery options of the course were identical in modular structure to the full-time equivalent.

3.3.2 Job advertisements

In previous studies, job advertisements have been used to identify skills required in the practice of information work (Cutting, 2002, Orme, 2008), and to identify the duties that define the role practised in specific job titles (Heimer, 2002). This study considered job advertisements to identify the skills and duties that defined the occupation practised in IM posts, and considered whether identifiers of IM as a profession could be found within the particulars of advertised posts.

3.3.2.1 Sources of job advertisements

Quarmby et al.'s (1999) survey of Masters' graduates was one of an ongoing series of studies carried out by the Department of Information Studies, University of Sheffield. Through contemporary studies the Department have identified the main sources used by MSc Information Management graduates to locate job information and employment details. The first three of these identified sources were used within this study; these sources being: the Appointments section of the CILIP Library and Information Gazette; the online service Jinfo (Jobs in Information), which contains adverts from the main recruitment agencies in the information field including Aslib; and The Guardian. (The University of Sheffield, 2006).

The use of these sources reflects those used in previous studies. Orme (2008) uses the Gazette to obtain job advertisement samples for her investigation as, 'it is recognized as the chief source of vacancies for LIS professionals in the UK,' (p. 31). For the same reason, both Lewis (2000) and Cutting (2002) use the publication of CILIP's predecessor,

the Library Association, as a source for their samples. The Guardian, and the Aslib publication *Managing Information*, are also used respectively in Lewis' (2000) and Cutting's (2002) studies, to broaden the range of samples collected, and to identify jobs outside of the traditional library market.

3.3.2.1.1 Use of online sources

Unlike the previous studies considered, this investigation uses online sources for employment information and job advertisements. The advantages of using online sources over traditional print materials are: that they are updated daily; that the job details are instantly accessible as soon as they are loaded onto the system; and that relevant advertisements can be easily identified through keyword searching. To this end it was decided to use the online Jobs section of The Guardian's website over the print equivalent. CILIP's printed publication *Gazette* was still used in this study however, as their online advertisement service LisJobNet.com, seems only to provide a replication of posts originally advertised in the publication (CILIP, 2008). It was also more convenient to use the *Gazette*, as unlike The Guardian's jobs supplements, it is printed once a fortnight rather than daily, and because of this, the publication only had to be consulted once during the sample period. This also highlights a disadvantage of using online resources, as they do have to be consulted regularly to ensure all relevant advertisements are identified.

A number of the job advertisements that appeared within these three sources also offered the opportunity to gain more information about the available post from the employer's website. Where this information was offered, this secondary online source was consulted.

3.3.2.2 Sampling of job advertisements

In order to identify a representative sample of contemporary job advertisements which could be compared to the courses selected, a systematic sample of IM jobs were taken from the highlighted sources at regular intervals between November 2007 and May 2008. The spread of sample periods over the year was to reflect the period of course study within the academic year, and was also a measure to minimise any seasonal variants which may have been present in the advertisement of posts in some sectors. Originally, samples were to be taken at week long periods- Monday to Sunday, in the penultimate week of every other month, from November. All adverts that appeared within the three sources during the sample period would be considered. However, this posed a number of problems. Although the online job sources were added to daily, jobs were not always removed after their closing dates. Therefore, a search for jobs in a later sample period may well return jobs that had already been considered in a previous sample. It was therefore decided that when considering advertisements from online sources, only those which had been posted within the sample week would be considered. To this end, publishing dates also caused a problem when considering advertisements from the CILIP Gazette. The Gazette is published on a fortnightly basis, with a Friday issue date. Therefore, if adverts were to be considered on the basis on when they were posted or published, none of the advertisements within a Gazette could be considered in a sample if it had been published on the Friday before the start of the sample week. The sample period was then modified to coincide with the publication of the Gazette, lasting for a fourteen day period starting from the Friday. The first sample period was between the 16th and the 29th of November 2008, with subsequent samples being taken in a period six weeks after the end of the last i.e. from 11th January, 7th March, and 2nd May 2008. As advised in Bryman (2008), a pilot sample for the means of refining the devised coding framework was taken during a two week period at the end of October. However, as the

sample number of job advertisements at the end of the study was so small, advertisements used within this sample week were also added to the final sample.

3.3.2.3 Identification of an appropriate sample

Although it had been shown by the literature that jobs with IM responsibilities could have a variety of different titles, as the investigation was concerned with what was recognised as the practice and profession of IM in the UK, it was thought best to only search for job titles that were labelled in such a way that demonstrated an explicit focus on IM. To this end, only job advertisements with the explicit title of 'Information Manager' were to be searched for within the sources. Titles which indicated a more senior level of responsibility such as 'Senior Information Manager,' were to be excluded as it was thought they would misrepresent the profession at a general level. However, the original search resulted in a very limited number of advertisements being identified, so it was extended to include these job titles. To increase the sample size further, the search was also expanded to include those titles which included the phrase IM. This meant job titles such as 'Information Management Consultant' could be identified and included, as were titles including 'Head of Information Management.' As with the course title search, job titles which indicated a focused type of IM such as 'Health Information Manager' were to be excluded, as were titles that suggested a combined focus such as 'Knowledge and Information Manager,' or 'Information and Records Manager.'

However, to identify a sample of a representative size, it was unfortunately necessary to utilise a small amount of subjectivity when considering whether to include some job titles. An advertisement for a 'Research/ Information Manager,' was considered in the sample as the job description did not indicate a strong focus on duties relating to the 'research' responsibility in the title. Also, two jobs which included the term 'data' along with

'information manager,' in the titles were included, as when the job content was considered, it was clear that it was organised data that was being referred to, and that by definition this was information, so the use of the term data was deemed to be a non sequitur.

3.4 Content Analysis

3.4.1 Coding schedule and manual

In order to collect data in a consistent manner, coding schedules and manuals were devised for collecting data from both the selected course information, and from the selected job advertisements. Two separate coding schemes were devised to analyse the two different types of documents, as due to their differing nature and purpose they both carried slightly different information, to a different degree of detail. Course information tended to detail specific theories and applications which would be taught within a course, whereas job advertisements would list duties in general terms. Although, separate coding schemes were devised, it was ensured that both had similar categories in order for the results to be successfully compared.

3.4.1.1 Course coding scheme

Categories for the course coding scheme were derived from the CILIP BPK and from the 2000 QAA Benchmarking statement for the Library and IM discipline. The use of the BPK, the basis for CILIP course accreditation, reflects methodologies used in previous curriculum studies which have analysed course content against the accreditation instruments of previous professional bodies (Ellis et al., 1997; Hawkins, 2000). As the QAA now has a presence in the determination of course content, and as not all courses found in the sample were accredited by CILIP, it was thought appropriate to include categories from this document also. Although a revised edition of this statement now

exists, it was not published until after the courses sampled for this study had begun, and it was assumed that it would have been the original version of the statement which would have been consulted for course design.

As with the job advertisement sample, four of the courses were selected in order to pilot the original coding scheme; two undergraduate courses (one accredited by CILIP one not), and two postgraduate courses (one accredited by CILIP and one not) were selected. This pilot allowed the applicability of the categories used within the scheme to be assessed, and to identify any clarification needed within the coding manual instructions. It was found that a few of the categories used within the coding scheme had to be revised to ensure categories were mutually exclusive, and that no overlap between categories occurred. Other categories had to be divided, with new details added, as it was found that not all of the course content could be assigned to the categories defined. Interestingly, it was found that such course content reflected topics specified in the QAA Benchmarking statements for Computing (QAA, 2007d), and for General Business and Management (QAA, 2007c), concurring with evidence found within the literature regarding the nature of the IM discipline. As with the job advertisement pilot sample, the content of the four sample courses were then re-analysed using the revised coding scheme and the results incorporated into the study.

3.4.1.2 Job advertisement coding scheme

Categories for the job advertisement coding scheme were derived from those successfully used and identified in previous job advertisement content analysis studies (Cutting, 2002; Heimer, 2002; Orme, 2008), and within the graduate study by Quarmby et al. (1999). It was found that many of these categories also reflected those identified for the course coding scheme, retrieved from the CILIP BPK. As mentioned previously, a

sample of job advertisements were used to pilot the job advertisement coding scheme devised, with changes being made to categories and instructions as necessary. Due to sample numbers, these advertisements were again re-analysed using the revised coding scheme, with the results then being considered within the study.

3.5 Data Collected

3.5.1 Course data collected

Data from the course information was collected in the following areas (a copy of the full coding manual is included in Appendix 2):

Course Preliminaries: Along with identifying data for the course such as the name of the University offering the course, and at which academic level; information regarding the Department offering the course was also collected, as existence of relevant academic departments was highlighted as a discipline identifier by Becher & Trowler (2001).

Course Structure: As identified by Hornby & Andretta (2001), as courses are modular in structure allowing individuals to tailor their own IM degrees, it was thought prudent for result comparison, to collect data regarding the modular structure of each course, along with data regarding the balance within each course between core and optional modules.

Topics & subjects covered by modules: The number of modules which covered a particular topic or subject, as identified within the coding schedule, was recorded. If a module covered a number of different topics or subjects, data was recorded for every topic/ subject category the module covered. Topic coverage by a module was not coded if not stated unless not doing so would have mis-represented the module. For example, a

component of a module evaluating an internet search engine would have to have involved use of the search engine although this may have not been stated in the module description. Data for core and optional modules were coded separately.

Although generic and transferable skills, such as skills within communication and self-management, are emphasised by both the QAA Benchmark Statement for the Library & IM discipline and the CILIP BPK, it was not felt appropriate, in terms of the aims of this project, to collect data regarding module coverage of these elements as by their own nature the skills are generic, and not unique to any particular discipline.

3.5.2 Job data collected

Data from the job advertisements was collected in the following areas (a copy of the full coding manual is included in Appendix 3):

Job title & sector: Data regarding the sector in which the advertised post was based was recorded to ascertain whether IM is still based within the corporate sectors of the emergent market, or whether it is now used as a form of re-branding for posts within more traditional areas of librarianship.

Skills, experience & knowledge: Data regarding any required qualifications for each post were collected to ascertain the presence of markers of the positions' professional status i.e. a degree level qualification in IM. To this end, data regarding requested membership to Professional Bodies were also recorded. Requests for both desirable and essential skills, experience and knowledge of topics and subjects were to be coded as it was thought the ideal candidate for the post would meet as many of the stated criteria as possible. Again, generic skills or personal qualities were not coded as these could not be

said to be unique to IM posts. The frequency by which skills, experience and knowledge were requested were also recorded as it was thought this could be an indicator of the importance of each to the post.

Duties of post: As with the skills, experience and knowledge, the frequency by which duties of the post were stated within the advertisement were recorded as an indicator of importance of the duty to the role.

3.6 Data Analysis

Variables within the study were either nominal (categorical) or dichotomous in nature. Univariate analysis of the data is presented in various forms including frequency tables, pie charts and bar charts; bar charts being the appropriate presentation for nominal variables (Bryman, 2008). Bivariate analysis of the data is presented again within bar charts, as well as contingency tables; tables of this kind being appropriate in the comparison of both nominal and dichotomous variables (Bryman, 2008).

Although data regarding the credit weighting of a course and its modules was recorded, due to the large number of differences between the courses in: the credit weighting of individual modules; and the course credit totals between Undergraduate and Postgraduate courses; no analysis was attempted at the implied importance of individual topics and subjects to the discipline by a credit weighting indicator.

As there were a large number of categories within both of the coding schemes, for the purpose of data presentation within the bar charts, coding categories were grouped by their coverage of the three areas of the BPK- the Core Schema, the Applications Environment, and Generic and transferable skills.