

## Appendix 1: Methodology

### *A1.1 Overview*

The broad aim of the project was to develop a better understanding of the way in which researchers in the UK use academic library services. The idea was to use primary research tools to adduce an up-to-date base of evidence that may be used for the development of policy. In view of this it was deemed important for the study to be as inclusive and as representative as possible. This was no mean ambition in an environment where response rates have fallen to relatively low levels and both librarians and researchers have significant pressures on their time. In an attempt to achieve the best possible overall result the project team adopted a multi-faceted approach which included not only wide-scale surveys and desk research but also an important qualitative element comprising an extensive round of focus groups and personal interviews. In summary this was a large scale, complex effort, a description of which is described in this section.

### *A1.2 Development of the project*

#### *A1.2.1 Consultation for project specification*

The project was carefully conceived by RIN in close collaboration with CURL and with the input of SCONUL. It involved close consultation with the researcher and library communities to ensure that the project specification was both well-targeted and comprehensive in nature.

#### *A1.2.2 Expert panel*

It is always critically important that large consultation projects such as this start on the right footing. The guidance provided by the project specification and the management team at RIN and CURL was supplemented by the recruitment of an expert panel. A core group of seven experts, representing the library community and different sections of the research community, provided valuable guidance particularly during the iterative process of developing the questionnaires. Indeed some members of the panel went out of their way to seek the additional input of colleagues.

#### *A1.2.3 Background research*

As with all projects such as this it is important that it is set in the correct context in terms of similar work that has been done in the past. A literature review was undertaken to ensure that, as far as possible, the observations, experience and conclusions of other workers was given appropriate consideration in the development of this project. Many of the works we considered to be relevant and pertinent to this project are referenced in the introductory chapter.

To provide a sound foundation for the questions designed to enquire about the library-provided information resources that researchers use, the array of main resources offered by ten libraries were reviewed. This work provided an appreciation of the resources offered by small and large, specialised and general research libraries. Because the list of resource types proved to be quite lengthy, they were divided into print-based and electronic-based resources all of which can be seen in questions 6

and 7 of the researchers' questionnaire and questions 4 and 5 of the librarians' questionnaire using the links in appendix 2 below.

### A1.3 Quantitative approach

#### A1.3.1 Survey of researchers

##### ■ Questionnaire design

The design of questionnaires inevitably requires a trade-off between a variety of different factors, chief among which are the length of the questionnaire form itself and the need to collect a sufficient amount of information to meet the project's objectives. Received wisdom and our own experience tells that the longer and more complex a questionnaire, the lower the response rate. There is also the possibility that the quality of responses might tail off towards the end of a long questionnaire as people get tired or begin to lose interest. The detailed nature of the project specification and the breadth of scope of the study naturally militated against the design of a short questionnaire. The project team had to make a judgement which weighed up the competing imperatives of including enough questions to achieve the level of detail required whilst at the same time keeping the questionnaire down to a manageable length. In the end we believe a practicable balance was achieved and the overwhelming majority of people saw the survey through to the end.

The fact that the questionnaire was relatively long made it all the more important that other aspects of the design were right. The layout was as clear as possible; questions were tested for clarity and the absence of ambiguity; the appeal at the head of the questionnaire form was as clear and inviting as we could make it; and a prize draw was offered to encourage people to take the time to respond.

##### ■ Extending the opportunity to participate to all UK researchers

One of the key goals of the study was to be as inclusive as could be: it was felt important to give as many researchers and librarians as possible the *opportunity* to participate in the consultation. For this reason there was no need either to design a sampling frame or to specify a desired sample size. Instead the project set out to contact all full time researchers and librarians in the higher education sector in the UK. This approach is, clearly, more akin to a census than a sample.

Using government and other sources it was estimated that there are in the region of 100,000 full-time researchers in the UK's higher education sector. Given that a web-based survey form was being used, the primary route to inviting researchers to participate was via email. To ensure the maximum possible number of researchers was given the opportunity to participate, a multi-pronged approach was formulated.

First, the biggest possible, highest quality commercial mailing list was purchased for all researchers excluding those in physics and chemistry. The total number approached 74,000 UK researchers who had "opted in" to the list.

Second, a number of key learned societies and publishers participated by emailing their members (or, in the case of publishers, their authors). Smaller societies with no email lists made their members aware by more traditional means such as newsletters. These organisations deserve much credit for supporting the consultation process in this way, and they should be publicly recognised for doing so. In alphabetical order they are: the Arts & Humanities Data Service; the British Ecological Society; the

British Psychological Society; Emerald; the Institute of Mathematics and its Applications; the Institute of Physics; the Institution of Engineering and Technology; Oxford University Press; PLoS Journals; the Royal Geographical Society; the Royal Society of Chemistry.

Finally, through the good offices of the Consortium of Research Libraries (CURL), many librarians were able to alert researchers in their own institutions to the survey using internal staff lists.

The combination of the commercial list plus the society and publisher lists and institutions' internal lists means that well in excess of 100,000 invitations to participate were dispatched to researchers in the UK. Inevitably there will have been some small degree of duplication but, as far as we are aware, this has been one of the most concerted efforts to reach the whole UK researcher population that there has been to date.

#### ■ Response rates and non-response error

When web-based survey techniques first became commercially available some ten years ago the response rates associated with them approximated rates achieved by conventional means (paper and post). At that time email was becoming widely used and spam was much less of a problem than it is today. It was perfectly possible to achieve response rates in the region of 20% for researcher surveys. Since then, however, response rates to surveys in the scholarly communications sector have declined inexorably. Today response rates to surveys in the academic arena are often similar to those associated with surveys of the general public: around 2%. The willingness of researchers to voluntarily participate in surveys has been adversely affected by many factors including the increasing pressures on peoples' work time and the sheer volume of surveys people have been subjected to particularly in recent years – which appears to have induced so-called “survey fatigue”. For this particular survey the results, particularly from the qualitative perspective, indicate that researchers often have an arms-length relationship with their library – sometimes not even associating the information they access from their desktops with the fact that a good proportion of it is there due to the work of their institution's library. This may have had a negative impact on response given that response rates are aligned with the level of peoples' interest in the subject area.

This survey achieved a response of 2254 researchers indicating a response rate of approximately 2.25%. Although we have gathered the opinions of a large number of researchers – indeed it is one of the largest publicly-accessible bodies of researchers' opinions on libraries gathered in recent times - it is crucially important to consider the extent to which their views are similar or different to the majority of researchers who did not respond. There are three key points to make about the issue of “non-response error” in the context of this study. First, we know from long experience of surveying academic researchers that, for the types of questions asked in this study, the variation in the population is relatively low. Non-response error can be quantified by telephoning a sample of non-respondents and testing whether or not their opinions differ significantly from those who did respond. When non-response error has been tested in the past the opinions of researchers who chose not to respond have not been significantly different to those who did respond. Second, our investigations of non-response error for this study revealed no significant differences in peoples' opinions; instead people cited lack of time and inclination as reasons for not responding. Finally, a major part of the project was qualitatively-based providing not only the opportunity to explore relevant issues in depth, but also providing a basis upon which to verify the representative nature of the results produced via the web survey.

### ■ Profile of respondents

The majority of researchers (91%) who participated in the wide scale survey currently work at a university/college. They represent the full spectrum of stages in the traditional career structure: 13% PhD students; 12% post-doctoral researchers; 21% lecturers; 22% senior lecturers; 9% readers and 18% professors. In terms of subject disciplines, all the major fields were well represented, such that we have been able to use broad subject area as the main base for data analysis. Finally, the main geographic parts of the UK were represented in the following proportions: 77% England; 15% Scotland; 3.5% Wales; and 2% Northern Ireland.

### A1.3.2 Survey of librarians

As well as understanding what researchers think about the resources and services provided by libraries, a complementary questionnaire was designed to discover what librarians think about the resources and services that they provide to researchers, and to gauge librarians' perceptions about whether or not they think such resources and services are valued. Many questions were deliberately mirrored in both researchers' and librarians' questionnaires in order to determine the extent to which the pattern of views was convergent or divergent on a range of central issues.

### ■ Extending the opportunity to participate to all UK librarians and the response

The project team attempted to reach as many librarians in UK research institutions as possible using a range of tools. As well as commercial lists the senior librarians involved with the project were able to ensure that as many librarians as possible were alerted to the survey via national closed lists and internal institutional lists. In total 307 responses were received.

### ■ Profile of respondents

Nearly all the librarians who participated in the wide scale study work for a university/college. 72% of them work for "pre-1992" institutions and 24% work for "post-1992" institutions. These institutions are geographically dispersed in the following proportions: 81% are located in England; 10.5% in Scotland; 3% in Wales; and 2% in Northern Ireland. The job types which attracted the biggest proportion of respondents were subject librarian (35%), librarian/director (18%), department head (16%) and assistant librarian (10%). The subject areas served by the librarians who responded cover the whole spectrum of broad subject areas. While this broad spread is useful from the point of view of the overall analysis, the results were not disaggregated to the level of subject area because the numbers would have been too small for meaningful analysis. We did, however, differentiate between the responses given by librarians/directors and those given by other library professionals to determine whether there were any significant points of difference based on peoples' position.

## A1.4 Qualitative approach

The qualitative part of the project proved to be the biggest in terms of the proportion of time and effort involved to deliver the results. We believe, however, that the effort was definitely worthwhile since the qualitative insights we gathered augmented very well the results of the web surveys. In addition to the input provided by the expert group the qualitative element of the project comprised three main strands: telephone interviews; literal responses via the two web questionnaires; and focus group discussions. The challenge for the project team has been to consider all the qualitative input and synthesise it in a meaningful way but we believe all the relevant general themes have been identified and are represented in the body of the report in their appropriate context.

### A1.4.1 Telephone interviews

Judgment samples of 30 interviews with individuals identified by the project team as being particularly knowledgeable about the subjects under investigation were conducted by telephone both in the early part of the project and towards the end. They were allocated broadly along these lines: two thirds researchers; one third librarians. The interviews near the beginning of the project were designed to help inform the nature and structure of the main survey instruments (the web questionnaires and the questions for the focus groups) while the interviews at the end of the project were designed to explore issues that had been thrown up by the project. It was useful, for example, to be able to talk, towards the end of the study, to teachers of librarianship about the extent to which young librarians are being equipped for a world of work that is changing fast, not least in terms of digital developments.

### A1.4.2 Literal responses on the web questionnaires

Although the primary role of the two web questionnaires was to collect quantitative, structured data, people were given several opportunities to provide additional free text comments. Nearly 400 researchers took the opportunity to volunteer additional comments about the resources and services offered by their library at the end of their questionnaire, so this is a significant source of qualitative information. These views were synthesised along with the other qualitative input for the purpose of writing the report, but they are also presented separately in list form towards the end of this appendix.

### A1.4.3 Focus groups

A total of 10 focus group discussions were conducted across the UK, 3 for librarians and 7 for researchers. Given the muted enthusiasm within the research community towards taking an interest in library-related issues, recruiting for the focus groups proved to be very challenging and time-consuming but was ultimately successful. Typically focus groups comprised a range of librarians or researchers – up to 10 for each group – representing different subject areas and different types of institution. The discussions were organised by an experienced facilitator and lasted for a morning or afternoon session. A great many people voluntarily contributed their views to this project and the sponsors and project team are grateful to everyone who participated by attending one of the focus group sessions. The goal was to include as representative a range of people as possible. The lists below indicate that the goal was achieved:

*Institutions represented by library focus group members:* UCL; Birkbeck College; Goldsmiths College London; Queen Mary College London; School of Oriental & African Studies; London School

of Economics; London South Bank University; Open University; Cranfield University; Nottingham University; Leicester University; De Montfort University; Loughborough University; UHI Millennium Institute; Edinburgh University; Herriot Watt University; Stirling University; Glasgow University; Strathclyde University; St Andrews University.

*Institutions represented by researcher focus group members:* Edinburgh University; Strathclyde University; Herriot Watt University; Edinburgh College of Art; Stirling University; St Andrews University; Leicester University; Loughborough University; De Montfort University; Imperial College London; London Metropolitan University; Cancer Research UK; Greenwich University; Kingston University; Oxford University; Oxford Brookes University; CCLRC (Rutherford Appleton Laboratory); Cambridge University; Anglia Ruskin University; Manchester University; Manchester Metropolitan University; Liverpool John Moores University; Paterson Institute for Cancer Research, Manchester; Salford University; Huddersfield University, Bolton University.

*Subject areas represented by focus group members:* Health & Social Care; Cancer research; Computer science; Library & Information Science; History; Psychology; Law; Public Health; Orthopaedics; Developmental Biology; Mathematical Modeling; English literature; Structural Biology/X-Ray Crystallography; Civil engineering; Pharmacology; History; Molecular Biology; Textual Studies (English literature); Marketing; Chemistry; Information Science; Physiology; Human Anatomy; Zoology; Pathology; Surgery; Mechanical engineering; Urban Studies; Art; Music; Mathematics/Statistics; Hospitality/Tourism; Film & Media Studies; Educational studies.

## Appendix 2: Summary analyses

The graphs presented in the main body of the report show the main highlights of the quantitative results. Readers who would like to peruse the data in more detail are welcome to use the data summaries listed below. These are displayed in pdf format. The data is presented in terms of percentages and absolute numbers. Research groups who wish to consider performing further analysis on the data may apply to RIN to obtain the raw data sets. They can be made available in the following formats: Triple-S XML (v. 1.1, 1.2); Triple-S Format (v. 1.0, 1.1); SPSS Data Format (SAV).

### A2.1 Data summaries for Researchers (available from the [project page](#) under attachments)

All responses (percentages) n=2254

All responses (absolute values) n=2254

Social sciences (percentages) n=734

Arts and humanities (percentages) n=428

Life sciences (percentages) n=475

Physical sciences (percentages) n=558

### A2.1 Data summaries for Librarians (available from the [project page](#) under attachments)

All responses (percentages) n=307

All responses (absolute values) n=307

Librarians/directors (percentages) n=56

Other library staff (percentages) n=251