



Use of the University Library by research centres and research institutes at Loughborough University

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Executive summary

A key role for Loughborough University Library is the effective support of research across the institution. There are major changes and developments occurring across the UK research community in technology, funding and information seeking behaviour. For these reasons, it is important that the University Library has a good understanding of how the University's research community uses information and the Library.

In 2008, the University Library undertook a study into research centres'/ institutes' use of both the Library and information. Six research centres were selected as case studies: Water Engineering and Development Centre (WEDC), Centre for Renewable Energy Systems Technology (CREST), Materials Characterisation Centre, Ergonomics and Safety Research Centre (ESRI), Centre for Child and Family Research and the Institute of Sport and Leisure Policy.

There were 3 inter-related phases to the data collection.

- Phase 1: The Library's management system was used to identify both books borrowed and the inter-library loans (ILL) requested by staff between January and December 2007.
- Phase 2: Online questionnaire sent to 89 staff with a 52% (47) response rate.
- Phase 3: One to one interviews were held with 10 research centre/institute staff.

The Library was able to develop a rich picture and deeper understanding of the relationship between its services and University research. The researchers who were surveyed use a wide range of different information in their research. Increasingly there is a preference to move towards digital information rather than print. For some researchers (but not all), borrowing books from the University Library is very important. There did appear to be a lack of awareness about the Library staff and services which are in place to support researchers. Some used Library systems regularly but the majority did so only sporadically. This finding also applied to the Inter Library Loan service. The majority of researchers indicated they did not use other local university libraries instead of Loughborough. Some research centres had their own resource centres in place for local support. There was not a significant demand from the researchers for information literacy training.

Various implications for the Library have come through in this study and a range of recommendations have emerged. The Library will consider the implementation of these in 2009.

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The Library would like to thank the Loughborough University research community for participating in this study and for giving up their time to complete the questionnaire and/ or be an interviewee. LISU's role in piloting the methodology is also much appreciated

1. Introduction

Supporting researchers is an important role for a library in a research intensive university, like Loughborough. In order for the Library to effectively support research, an in-depth understanding of researchers' information needs is necessary. The Research Information Network¹ has produced a report looking at the national picture, which has been very useful for highlighting issues to be explored within higher education libraries, but Loughborough University Library determined that it would also be valuable to investigate specific issues affecting research centres in the local context.

The Library supports research at Loughborough University in a variety of ways. A wide range of print and electronic sources are provided, along with electronic systems to enhance access. The Library also has a team of academic librarians who liaise directly with academic departments to support the information needs of the academic staff and students within them. These needs include providing support for student learning, as well as for academic staff who have both a teaching role and undertake research. There are also a significant number of research institutes and centres at Loughborough in which many staff do not have a teaching role at all. The purpose of this study is to enable the Library to find out more about the needs of the researchers working in such centres and in environments which are very different to the traditional teaching/ research scenario. It has been designed to establish what researchers know about the Library's services and resources, if the services and resources are currently relevant to their needs and how the Library can improve and develop its services and resources to provide effective research support in the future.

2. Methodology

This study was completed between February and December 2008 and was undertaken by three University Library staff. There are currently eight research institutes and 39 research centres at Loughborough University and they vary both in size and in their relationship with academic departments. A sample of two centres from each of the three faculties was used for the study:

- **Faculty of Engineering**
Water Engineering and Development Centre (WEDC)
Centre for Renewable Energy Systems Technology (CREST)
- **Faculty of Science**
Materials Characterisation Centre
Ergonomics and Safety Research Institute (ESRI)
- **Faculty of Social Sciences and Humanities (SSH)**
Centre for Child and Family Research
Institute of Sport and Leisure Policy.

This small sample approach enabled an in-depth analysis of the researchers to take place. The sample would also enable us to explore variables, such as disciplinary differences and the relative size of the research centres and institutes. Both academic and administrative staff were included throughout all stages of the survey.

There were three main data collection phases in order to obtain both quantitative and qualitative data and keep the demands on the research centre staff to a minimum.

Phase 1: Gather quantitative data to find out how the staff are currently using the book lending and inter-library loan (ILL) services provided by the Library.

This was achieved by checking our Library management system and internal

statistics to discover how often individuals in the selected centres borrowed books and used the inter-library loans service from 1st January 2007 until 31st December 2007.

Phase 2: An online questionnaire to obtain mainly quantitative data but also to start to provide some qualitative material too. The questionnaire (see Appendix 1) investigated the use of different types of information resources, access to these resources, contact with the Library and library services and perceived training needs. It was constructed using UCCASS² questionnaire software and was mainly tick box answers with some free-text areas. It was piloted by a separate research centre (LISU) which resulted in a reduction in the number of questions. A total of 89 staff from the six sample research centres and institutes were then sent individual, personal e-mails from the project team asking them to complete the questionnaire. This was because it was necessary to know the names, centres and types of staff to ensure balance in the next stage of the survey. It was distributed in June 2008 and resulted in 47 staff completing the questionnaire which represents a response rate of 52%.

Phase 3: The questionnaires were used to identify and then interview ten individuals which would investigate (in more depth) the key themes that had been brought to light from the data analysis of the questionnaires. The project team ensured that individuals from all of the centres were included, along with staff with different roles and research experience. The individual interviews were conducted by the project team in the centres or institutes with the data

being recorded on templates (see Appendix 2). Using templates enabled the data from all of the interviews to be compared easily and gave a similar structure to the interviews.

3. Results and discussion

3.1. Information used in research

The study supplied the Library with significant insight into the information used in research in the six research institutes. It was apparent that researchers used a wide range of information sources both from the Library and from elsewhere. Data on information use was captured through the analysis of book loans over a calendar year, the questionnaire and the interviews. In the questionnaire, individuals were asked how often they used different categories of information (print books, e-books, print journals, e-journals, print conference papers, electronic conference papers, print government publications, electronic government publications, institutional repositories, web sites and other information). The frequency options were 'daily', 'weekly', 'monthly', 'once a term', 'once a year' and 'less frequently'. This allowed a score range to be developed from 6 (daily) to 1 (less than once a year). Ranked frequency scores were calculated for each source (see Table 1).

Table 1: Ranked use of different information sources

Rank (with score in brackets)	Source
1 st (339)	Print books (194) + e-books (145)
2 nd (324)	Print journals (151) + e-journals (173)
3 rd (311)	Print government publications (137) + electronic government pubs (174)
4 th (290)	Print conference papers (133) + electronic conference papers (157)
5 th (240)	Other web sites(240)
6 th (112)	Institutional repositories (112)
7 th (54)	Other sources (54)

Various conclusions can be drawn from Table 1:

- Most information used for research comes from the main categories identified in the questionnaire (books, journals, government publications, other web sites, conference papers).
- There is not a marked difference in the frequency of use of the different information categories.
- Institutional repositories are not used very often for research information

Table 2: Ranked use of information sources that are used at least weekly

Rank (with score in brackets)	Source
1 st (42)	Other web sites (42)
2 nd (36)	Print books (22) + e-books (14)
3 rd (34)	Print journals (12) + e-journals (22)
4 th = (25)	Print gov. publications (7) + electronic gov. pubs.)
4 th = (25)	Print conference papers (10) + electronic conference papers (15)
6 th (5)	Institutional repositories (5)
7 th (6)	Other sources (6)

Table 2 records the ranked order of information that is used at least weekly which produces a similar ranking to the one shown in Table 1.

3.1.1 Print books and e-books

Print books: 93% (43) of respondents used books at least yearly, with 47% (22) accessing them on a weekly basis. Despite this, a large percentage (42%) of researchers did not borrow any books personally from the Library in 2007 (see Table 3).

Table 3: Overall borrowing by staff in Research Centres

Research Centre	No. of staff in Research Centre	No. of staff who borrowed 1 book at least	No. of staff who did not borrow any books	Number of books borrowed
Materials Characterisation Centre (Faculty of Science)	7	2	5	5
Renewable Energy Systems Technology (Faculty of Engineering)	18	4	15	55
Ergonomics and Safety Research Institute (Faculty of Science)	30	6	24	46
WEDC (Faculty of Engineering)	19	4	15	33
Centre for Child and Family Research (Faculty of SS&H)	13	3	10	22
Institute of Sport and Leisure Policy (Faculty of SS&H)	10	8	2	106
Total	97	27	70	267

In some instances, it was indicated that colleagues borrowed books or that other research centre staff did so on their behalf. This low level of library borrowing could have been anticipated in the science/ engineering research centres but was not expected in the social science areas. One research centre (Institute of Sport and Leisure Policy) was the exception accounting for 106 (37%) of the total 284 loans to research centres. The book borrowing that did take place was concentrated in a few individuals rather than across the research community.

Some researchers indicated in the interviews that, in terms of research, the Library collection was too broad, not specific enough and not easily accessible. Distinction was drawn between the role of books for research as

opposed to teaching (where they were perceived as having a major role). The people interviewed preferred to purchase books for their research rather than borrow them from the Library. Grants often included funding for book purchasing. Some research centres maintain their own resource centres which provide access to books. Several researchers mentioned that the University Library often did not have the book titles that they needed.

E-books: E-books were used less than print books with only 31% (14) using them on a weekly basis (compared to 47% who used printed books weekly). Only one interviewee stated how important they found them because they were easier to access and “carry”. Others saw e-books as removing the need to physically visit the Library. The view was expressed that people preferred to read from the printed page as opposed to a screen.

3.1.2 Print journals and e-journals

The preferences identified in a previous study³ undertaken by Loughborough University Library about accessing e-journals rather than print journals emerged in this study as well. 26% (12) of respondents consulted print journals at least weekly, compared with the 49% (22) who accessed e-journals at least weekly. In the interviews, preference for e-journals was also expressed, as they were seen as 'essential'. Some researchers needed access to a small number of titles, whereas others needed a broader spread. There was also variance about from where people accessed the journals, some primarily via the Library, whereas others relied on different sources. Some researchers expressed the view that the Library did not subscribe to the titles they needed, whereas others viewed the Library as having 90% of those they required.

A wide range of approaches was used for finding relevant journal references, including electronic alerts, MetaLib, SFX, commercial databases and Google. If an article is required that the Library does not have, some researchers purchase them using a credit card, some simply do without, whilst others use inter-library loans.

3.1.3 Conference papers

Print and electronic conference papers were both valued by researchers. There was a preference for electronic format with 42% researchers consulting electronic conference papers at least monthly, compared with 31% using print.

3.1.4 Official/ government publications

Electronic official publications were used at least monthly by 70% (32) of respondents. This compares with the 37% (17) who use the print versions on a monthly basis. Official government publications are obviously a very significant source for a wide range of researchers at Loughborough University.

3.1.5 Institutional repositories

Institutional repositories are rarely used by the respondents. 48% (22) people use them either once a year or less frequently as sources for research. As they are a relatively new source of information, this low usage is perhaps unsurprising.

3.1.6 Other web sites

A major source for researchers proved to be 'web sites not covered in 1.1 – 1.5'. 94% (42) consulted web sites for their research at least weekly, with only one researcher using web sites less frequently than once a year.

3.1.7 Other information types

The sources already explored represent those most used by researchers in the study. 18 people did describe other information sources accessed in their work. These included grey publications, personal contacts within industry and academia, newspapers (online and print), newsletters, annual reports, online manuals/guides/tutorials, information provided/produced by clients, podcasts and videos and information from emails.

3.2 Role of the Library

As well as providing information resources in a variety of formats, an academic library offers a range of services to support researchers. In January 2008, Loughborough University Library launched a new webpage to promote its range of services to support researchers:

<http://www.lboro.ac.uk/library/services/Research%20Support.html>

This was complemented by an accompanying printed leaflet for distribution in the Library and beyond. The data from both the questionnaire and the interviews confirm that such publicity is necessary and more should be done.

Two of the free-text comments on “our library services” within the questionnaire illustrate that respondents would like to know more about services and that the administrative staff in the research centres and research institutes could play a useful role in this publicity:

- *There’s probably loads of really useful stuff you offer, but that I don’t know about*
- *Promoting your services to IT staff like myself would allow me to promote them to staff in the department*

This point was confirmed in the interviews, with one interviewee summing up the problem that many researchers face: *you don’t know what [you] don’t know.*

3.2.1 Academic Librarians

One concerning result from the questionnaire was that ten respondents (22%) did not know that an academic librarian liaised with their department.

Academic Librarians should be the lynchpin of departmental / library liaison, so this is an area that should be addressed. More positively, 17 respondents (37.78%) had had some form of contact with their academic librarian within the past year. This topic was explored in greater depth in the interviews. One of the researchers had a very healthy relationship with their academic librarian, who he found to be *very helpful*. *If [he] can't find something [he] calls her*. However, two interviewees stated that they did not know that they had an academic librarian or what they did. Once the role had been explained, they both agreed that this person could be very helpful to them. To one of them, the 'people' side of the Library was a resource that she had not thought to exploit. She had not been aware of librarians when she had been an undergraduate and had carried on using the same information finding techniques from that time but she can now see how an academic librarian could save her time in the future.

Another interviewee who had been unaware of his academic librarian suggested that it could be useful if the Library distributed a PDF image of their academic librarian to each member of the research centre, so that they knew what they looked like and how they could help. The staff could then print out or store the information electronically for when they needed that sort of help. It is an idea that will be suggested to academic librarians.

3.2.2 Physical Space

Some UK university libraries are creating space specifically for certain types of user (for example, the Graduate School Reading Room at University of Leicester Library and the separate Information Commons building at the University of Sheffield, which is aimed at taught course students).

Loughborough University Library does not currently have any researcher only areas, and so the interviews were used to explore whether a separate physical space for researchers would be valued.

All of the interviewees felt that they did not need any dedicated research space for themselves, as they were satisfied with their office facilities or worked at home or on the move. On reflection, one did think that an individual study room might be good if she did have to use any printed Library resources. Also, three suggested that a dedicated postgraduate area might be useful for their postgraduate students or postdoctoral researchers, who did not have such generous office space as they did themselves. One interviewee commented that such space would have been useful when she had been visiting Loughborough when employed by another institution.







3.2.3 Library systems

The questionnaire results indicated that the Library's electronic services were used more frequently by respondents to retrieve books and journal articles, than its physical premises. Even so, a large proportion of researchers use Library's electronic systems (such as MetaLib, SFX links and the Library Catalogue) only sporadically. Whilst 15 individuals (33%) used them daily or

weekly, 21 researchers (45%) used them only once a term or less frequently. Table 4 shows the frequency with which questionnaire respondents use Loughborough University electronic services (e.g. MetaLib, SFX link, Library Catalogue).

The interviews were used to examine in more detail users' perceptions of the three main Library electronic services: the Library web pages; MetaLib – the Library's electronic gateway to databases; and the Library catalogue.

Table 4: Frequency with which questionnaire respondents use Loughborough University electronic services

Use frequency of Loughborough University electronic services	Number of respondents	% of respondents
Daily	6	 13.04%
Weekly	9	 19.57%
Monthly	10	 21.74%
Once a term	7	 15.22%
Once a year	4	 8.70%
Less frequently	10	 21.74%
Total	46	

Library web pages: These were used mainly as a jumping off point into electronic resources, primarily e-journals and MetaLib. One research centre, ESRI, has its own intranet which deep-links into certain sections of the Library's web pages and its interviewees were unaware of other sections of the website. None of the interviewees mentioned being aware of the Research Support web pages and two stated clearly that they were not aware

of them. One interviewee commented about the fact that *a lot of useful stuff [has] moved to LEARN that would be better on the web site*. Learn is the University's virtual learning environment. As the Library's web pages are used to market and promote services and resources, these results cause some concern.

MetaLib: In the interviews, not all of the researchers knew what 'MetaLib' was until it was explained that it was the Library gateway to electronic databases and journals. It was interesting to discover that one interviewee had never used the databases on MetaLib and three of the others rarely used it. None of the interviewees were very enthusiastic about MetaLib, with the main complaint being that it involved too many clicks to get to what they wanted. Two of the interviewees mentioned using the electronic journals section of MetaLib. One of the interviewees stated that she did not do her own literature searching as this was done by her research assistants.

Library Catalogue: All of the interviewees knew of the Library Catalogue (OPAC) although two did not use it. One of these was because he *doesn't borrow books*, whilst the other used the research centre's own library catalogue. Another *rarely used [it] nowadays* and others found the Library Catalogue *OK* and that it *does its job*. Nobody was particularly enthusiastic about the OPAC with improvements suggested, such as *an Amazon like interface* so that book covers could be seen.

3.3 Accessing material

It was clear from the analysis of book borrowing (see Table 3) that many researchers are not coming to the Library to borrow material. This was confirmed in the interviews as the researchers either felt that the Library was not in easy reach of their office, as it is in a different part of the campus to some of the centres, or it simply did not have the material that they needed. Instead of visiting the Library, researchers used electronic information, the departmental library/ resource centre, the University Library's inter-library loan service, purchased information themselves or consulted an academic colleague.

3.3.1 Other libraries

Most respondents to the questionnaire did not appear to use other local university libraries rather than Loughborough. The majority of respondents (90.48%) used another East Midlands university library less than once a year; 7.14% used one once a year; whilst one person (2.38%) visited once a term. Even other major research libraries were rarely visited. Again the majority (78.57%) visited these less than once a year, although two (4.76%) visited monthly, three (7.14%) visited once a term and four (9.52%) visited once a year.

The questionnaire results showed there was a limited awareness about the SCONUL Access scheme, which allows researchers to borrow material from many other university libraries. 39 respondents (84.78%) stated that they had not heard of the scheme, which strongly suggests that Library publicity about this scheme has not been impacting on the researchers.

3.3.2 Departmental libraries/ resource centres

Two of the research centres (WEDC and ESRI) surveyed have their own libraries or resource centres, with other centres having individual or small local collections. The questionnaire results showed that these local collections were popular, with four (9.09%) respondents using them daily and another 14 (31.82%) using them weekly. These figures confirm the thoughts emerging in the interviews that local provision can focus more specifically on researchers' needs. The University Library was not seen as having the breadth or depth that many researchers need. Resource centres could focus on grey literature and the *type of things [that] the Library would not want*. The University Library should reflect on the importance individuals attached to local provision. Both interviewees and questionnaire respondents were concerned about how the decrease in the staffing of these collections was going to affect their acquisition of material. Some interviewees commented about how the Library could help to organise the collections or perhaps aid in the establishment of a knowledge management system.

3.3.3 Inter-Library Loans

The questionnaire results and the inter-library loans data analysis in Table 5 show that, though it is an important service for some individuals, it is not used very regularly by many. 31 respondents (68.88%) used the service only once a year or less. None of the respondents used the service daily or weekly.

Table 5: Use of inter-library loan service by research centres in 1st

January 2007 – 31st December 2007

Research Centre	No. of staff in Research Centre	No. of staff who used ILL service	No. of staff who did not use ILL service	Number of ILLS
Materials Characterisation Centre (Science)	7	0	7	0
Renewable Energy Systems Technology (Engineering)	18	0	18	0
Ergonomics and Safety Research Institute (Science)	30	2	28	47
WEDC (Engineering)	19	1	18	6
Centre for Child and Family Research (SS&H)	13	2	11	8
Institute of Sport and Leisure Policy (SS&H)	10	1	9	40
Total	97	6	91	101

The Library offers ILLs both as a traditional paper copies service and as secure electronic delivery (SED). Only 12 respondents (25.53%) were aware of SED. When it was explained to them, the majority stated that they would prefer to use it rather than obtain paper copies. One person, however, having used SED had found it to be *unreliable*, which needs investigating on an individual level. This finding shows a lack of awareness amongst researchers about current Library services, which has come through elsewhere in this study.

3.3.4 Use of Academic Colleagues

The Research Information Network national survey⁴ in 2007 found that researchers were “most likely to turn” to inter-library loan to access material

they could not obtain directly from their institution. This approach is different to that established in this study where it was found that at Loughborough they were more likely to contact an academic colleague. One respondent to the questionnaire would do this on a daily basis; three (6.52%) weekly; 14 (30.43%) monthly; eight (17.39%) termly and seven (15.22%) used this method on an annual basis. This high level of consulting colleagues for material is in contrast with the inter-library loan results where only five used that service on a monthly basis. This could be down to the pragmatic reason that they work in close proximity to academic colleagues and therefore it is much easier and quicker to obtain an item that way. The indication is that researchers prefer to use their own methods to obtain material and the inter-library loan service is seen a final resort.

3.4 New Services

As part of the interviews, researchers were asked for suggestions about new services that the Library could offer to researchers. This resulted in some useful and practical ideas:

- more enticing exhibitions to get the researchers to visit the Library building
- more visibility of how to get help as researchers did not always know they were going to need help and needed clear pointers to it when they did
- regular (but not too frequent) e-mails from the Library with catchy, relevant subject lines, such as “New project? Did you know how the

Library can help?” could help remind researchers of the Library’s existence in all of the different areas

- deep-linking into cumbersome websites

The researchers also highlighted potential areas of investment to build up the Library’s subject collections and electronic resources. It was also made clear that the Library needed to do more to elicit recommendations and advice from researchers on a regular basis to ensure that Library collections are more pertinent to their needs.

3.5 Training

Academic libraries have long promoted user education and are now often synonymous with teaching information literacy, particularly to undergraduates. A Research Information Network’s recent report ⁵ identified general principles of good practice which academic libraries could adopt to enhance the information literacy of researchers, including:

- Clear objectives and marketing to target audiences
- Regular communication with researchers, and exploitation of researchers’ peer-to-peer networks
- Collaboration between library staff and researchers
- Inclusion of library based events in central staff development programmes
- Continuance where practicable of one-to-one support
- Training provision that goes beyond information seeking to address broader information issues

Our analysis of training for research centres should therefore take these principles into account. It is also worth stressing that, in terms of using resources such as MetaLib, most comments in both the questionnaire and in the interviews were pleas to reduce the complexity of access to resources – “to reduce the clicks”. Researchers in this survey largely do not want training in how to use such services but they do want services to be simpler to use, either because they use them infrequently or because they have experience of using simpler interfaces such as Amazon. Compared with these comments, demands for training were both fewer and less strident. A significant proportion of respondents did not want any more training although one interviewee did observe that the training would be appreciated if it was held in the research centre itself and targeted at their needs.

Some interviewees identified specific examples where they had failed to find particular materials and references. One to one training is appropriate in such circumstances and increased communication with research centres would make this clear. Where further training was sought it was mostly in the areas of RefWorks, followed by current awareness and MetaLib. Knowledge Management and longer management courses were also suggested but more information is needed to establish the extent of demand for these.

3.6 Institutional repository (IR)

Regarding the institutional repository (IR) the questionnaire dealt specifically with data but there was an opportunity to discuss the IR in more detail in the interview. One view from a researcher in CREST was particularly heartfelt: *everyone should be using it (the institutional repository) more and I would like to see the Library strengthen its' team in this area. The electronic form is a step in the right direction. Copyright is difficult and academics need more help with this.*

This researcher further believes that the IR team should be more active, e.g. by comparing academics' publications lists with what is in the IR to get more papers submitted. Since the Research Excellence Framework (REF) is expected to be largely based on citations and IRs are a means by which citation counts can increase, it is of strategic importance to add content to the IR.

One question in the survey sought to explore the demand for the Library to provide a service whereby data is preserved and stored in the institutional repository. Whilst the majority of respondents viewed the deposition of data favourably, there were concerns over the confidentiality of data and the possibility that deposition would take up significant portions of their time. Whilst the institutional repository will currently accept data, only one dataset has so far been received and little effort has been expended so far in promoting the Library's ability to accept data. The Library does not have a collection management policy for data, the server space to store huge quantities of data or the expertise to handle a wide variety of data formats. It

does raise the issue as to whether the Library should inject more effort into this area. Research Councils appear to be moving towards more stringent guidelines for the sharing and preservation of data and increasingly obligations are falling on lead investigators to share data⁶. There is need for more clarity as to whether individual institutions will need to provide a permanent archive or whether a national data archive will be created.

4. Conclusion

This study has shown that researchers use a wide range of different sources for their research activities. A preference was shown for using electronic versions of documents (including journals, government reports and conference proceedings) as opposed to paper. The increasing availability of e-books was seen as being a positive development. For the majority of researchers, borrowing books from the University Library was not common practice but for a few it was very important. It was also apparent that researchers were not using borrowing facilities from other regional University libraries instead. Various research centres have built up their own resource collections which were used for research. Researchers expressed concern that in some cases the financial resources for managing these collections were being reduced. It is also clear that researchers did not always find it easy to communicate easily with the Library, with some not even aware that the Library would consider purchasing books for research.

The study demonstrates that the Library could improve the publicity of its key services to researchers. This especially applies to the academic librarians, as

their role is to be the link between the departments and the Library. They have to ensure that communications are smooth in both directions but this currently does not seem to be happening effectively for all the staff in research centres and institutes. If academic librarians could enhance this role, it should make the research process easier for the researcher, as well as ensuring that the Library is aware of the needs of the researchers and can anticipate their demands more effectively.

This study also indicates the Library could make its services more user-friendly and intuitive. The Library systems were not perceived to be particularly helpful, although the Catalogue *did its job*. The Library web pages are being used by researchers but there is a concern that there is a low level of awareness of many pages. This is particularly the case for the Research Support web pages as these were designed specifically for academic and research staff, as well as research students. Again more targeted publicity is needed, perhaps aimed at administrative staff as much as the researchers, so that the different layers in the centres all know the same information, and so that it can be spread internally as well. MetaLib did not mean very much to some of our researchers which indicates that when systems are introduced or replaced, even more careful consideration should be given to the name.

The researchers interviewed did not consider more research space in the Library to be a priority for themselves. It was suggested that postgraduates might appreciate more dedicated Library space. It was not seen as a pressing

need but it does merit investigation as other universities have provided such areas and they are, anecdotally, popular.

It was also made clear in the interviews that it could be helpful if the Library was more active within the Research Centres themselves, perhaps helping in practical ways with the arrangement of internal collections or possibly information resources for the Centres' intranets, as well as providing tailored training sessions. Such involvement would raise the profile of the Library within the Centres and Institutes which would in turn help the publicity and development of existing and new Library services. The following recommendations are made as a result of this study.

5. Recommendations

Information sources

1. With some research centres losing their information officers, there is a need for closer working relationships between the Library and the research centres.
2. The Library should contact researchers via e-mail providing a pdf attachment for book recommendations and explaining how to recommend journal subscriptions for purchase.
3. The Library needs to ensure its e-book provision is developed to support research (as well as learning).
4. Researchers need access to a wider provision of electronic sources.

Role of the Library

5. The Library needs to improve the visibility of academic librarians in the Research Centres to ensure that academic, research and administrative staff receive timely information support.
6. The Library should work with the Graduate School and other bodies in the University to investigate the need for research space for postgraduates.
7. The Library needs to heighten awareness of the Library's Research Support web pages amongst academic staff, researchers and research centre administrative staff as their gateway to library services and resources.
8. The Library should consider ways to improve the functionality or arrangement of MetaLib, as well as potential alternatives to it, as a method to encourage the usage of subscription databases by researchers.
9. The Library should consider purchasing added value content for the Library Catalogue, such as the provision of book jacket images and tables of contents, to improve its usability.
10. The Secure Electronic Delivery inter-library loan service and SCONUL Access scheme need to be promoted to researchers.
11. The validity of electronic signatures for inter-library loans needs to be revisited to improve access to inter-library loans from both on and off campus.

Training

12. The Library should work with Staff Development to deliver training to academic and research staff on topics such as finding research information, current awareness and RefWorks.

Institutional repository

13. Key stakeholders across the University need to establish how the input of research papers into the IR can be increased.

Data storage

14. A watching brief on data storage needs to be maintained by the Library. A pilot data storage project should be undertaken to increase skills sets and knowledge.
15. Storage of data should be incorporated into the Library's collection management policy.

This study has raised further areas which the Library should consider investigating. 'Other web sites' was identified as the most used source in research but more context is needed to discover what this actually means. It would also be useful to undertake a similar study to explore sources used by academics for teaching (as opposed to research).

References

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⁶ Thorley M. *The Data Sharing Policies of the UK Research Councils: Principles and Practices*. 2007. <http://eprints.rclis.org/12291/>. [Accessed 12th January 2009]

Appendix 1 Questionnaire sent to research centre/ institute staff

Personal

Please tell us your name and email address - this will help us clarify any points, if necessary, at a later date

Please indicate the Institute or Centre in which you are based.

Are you researcher or are you in a primarily administrative role?

Accessing information

How often do you use the following types of information in your research work? (*daily/ weekly/monthly/ once a term/ once a year/ less frequently*)

Books	Official gov. publications (print)
E-books	Official gov. publications (electronic)
E-journals	Institutional repositories
Print journals	Websites (not covered)
Conference papers (print)	Other types of information
Conference papers (electronic)	

How often do you use the following to obtain a book or journal article? (*daily/ weekly/monthly/ once a term/ once a year/ less frequently*)

Library building	Another East Midlands university library
Library electronic services	Another major research library
Departmental library	An academic colleague
Inter library loan service	

Please specify any other information sources you use.

When did you last have any form of contact with your academic librarian? (*2007/ 2008/ Before 2007/ 2008/ Don't know when/ Didn't know an academic librarian liaised with my department*)

Training

In which of the following services would you like further training?

Library catalogue	Current awareness services
MetaLib	Searching the web effectively
Individual databases accessed via MetaLib	Other information training
Refworks	No training required

Please specify any other training requirements here

If you need help using other Reference management software (e.g. EndNote, EndNote Web) please tell us the name of the software.

If the library offers more training, how would you like it delivered?

(*Individual session/ group session with other Centre members/ Online training course/ Other*)

If you would like training as an individual or in a group, please indicate which time(s) of the academic year would be best for you (You may choose more than one answer)

(Summer vacation/ Autumn term/ Christmas vacation/ Spring term/ Easter vacation/ Summer term/ no specific time)

Using other libraries

Have you heard of Sconul Access (previously called Sconul Research Extra) which permits borrowing from other university libraries?

Are you aware of the Secure Electronic Delivery (SED) inter library loan service which delivers journal articles to your desktop?

If you answered "yes" to the previous question, would you use SED in preference to requesting photocopies and if you replied "no", please explain why.

Would you be willing to put research data in the institutional repository?
(Definitely yes/ Cautiously yes/ Maybe/ Probably not/ Definitely Not)
If no, please indicate why.

Please detail any other comments you have about our library services and research support

Appendix 2 Template for follow-up interviews with academic staff

Name of person being interviewed + Research Centre:
Prompts; Research area Length of time in research Length of time in University
Books Prompts: How often books are used Nature of books (methodology/ subject specific) Where books are from (office/ Library/ department) – priorities Where e-books sit Extent Library has books they need What do you do when library/centre does not have what you need?
Use of journals Prompts: How often journals are used Nature/purpose of journals (methodology/ subject specific) Where journals are from (office/ Library/ department) Where e-journals sit Extent Library has journals they need What do you do when library/centre does not have what you need? ILLs, purchase etc.?
Library systems and their research Prompts: Perceptions of: Library web pages – pages regularly used? Pages that might be useful? MetaLib (explain what it is as a lead in) Opac
What Library can do to help with their research Prompts: More training New services More sources Research space

Any other comments about library or information resources, not covered above?