
The use of library and information resources by research staff at Glasgow Caledonian University

*Rona Ferguson and
John Crawford*

The Authors

John Crawford is Library Research Officer at Glasgow Caledonian University where he is responsible, inter alia, for evaluating the Library's services to users and directing and conducting research projects. Rona Ferguson is a qualified librarian who is currently on the committee of the Centre for Contemporary History at Glasgow Caledonian University and an experienced qualitative researcher.

The Occasion

An amount of University RAE funding was made available to the Library which made the research possible. Some funding remains to carry the work forward and collaborative activity would be welcome

Abstract

This research evaluates the use made of LIS by researchers at Glasgow Caledonian University with a view to effecting improvements where appropriate. The interview method was used. As a result of the study electronic requesting of inter library loans has been introduced and special Library web pages for researchers are now available. The need for co-operation between the Library and the Research and Commercial Development Office was recognised. The research methodologies of researchers was found to be extremely variable and often unsophisticated. Direct contact with the Library is in decline.

Acknowledgements

The research project was directed by John Crawford and the interviews and report writing were undertaken by Rona Ferguson. Thanks are due to all the interviewees whose identities are protected by the Data Protection Act 1998. The support of the University's Research and Commercial Development Office is gratefully acknowledged and especially the contribution of Linda Aitcheson. We would also like to thank Professor Gordon Dickson, Pro Vice Chancellor (Development) for his useful suggestions, interest in and support for the Project.

INTRODUCTION

This article draws on data from an internal Glasgow Caledonian University report on the Library's support for researchers in the University. The study was undertaken between January and June 2000 and was directed by the Library Research Officer (John Crawford) and the Project Officer was Rona Ferguson. Glasgow Caledonian University is a 1992 University (Founded in 1993) with some 14,000 students and about 700 academic staff of whom about 190 are submitting for RAE 2001.

At the outset of the study a qualitative approach to the subject was adopted as this would allow a fuller account of the situation in Glasgow Caledonian University to emerge through the experiences of those active in research. It was felt that interviews would provide a picture of the prevailing relationship between research staff and the library and information service; how researchers use the services, how the services available are integrated into the general research skills of individuals and what developments in the service might be most appropriate to the research habits of staff within the institution. The qualitative approach also allows respondents to describe the wider environment in which their experiences are contextualised which in turn assists in the ascription of meaning to accounts of attitudes and practices. It also helps to ensure that library and information needs are not isolated from the general working environment or narrowly defined by uninformed parameters introduced by the study.

There was also a severely practical constraint. Funding was extremely limited and the qualitative approach allows rich amounts of valuable data to emerge at relatively little cost. In total 20 interviews were conducted (covering 22 people) and included those from the departments of Science (3 - Chemistry 1; Biology 2), Nursing (2), Podiatry (1), Risk & Financial Services (1), Sociology (3), History (2), Management (1), Engineering (1), Psychology (2), Lifelong Learning (1), Vision Sciences (2), Mathematics (2), and Faculty of Science & Technology (1). Interviews were semi-structured in that they followed a basic

core of questions but they also encouraged respondents to express any other concerns relating to their research environment.

A literature review was undertaken (Barry 1995; Erens 1996; Bell 1997; Jacobs 1998) which, *inter-alia*, referred to:

- valued desktop access;
- users preference to print-off electronic journal articles and retain hard copy;
- a prevailing scepticism towards publishing work in electronic journals;
- a persistent attachment to browsing physical journals in the library;
- concern over journal back issues in the electronic collection;
- preference for familiar sources and research strategies;
- the 'democratising' effect of e-mail in informal contact;
- the constraint of time on research work.

FINDINGS [Direct quotations from interviewees are in indented text]

1 Researchers needs

Time In line with a recent study in Northern Ireland (Streatfield 1998), time emerged as a key issue for researchers. Though not directly related to 'information' needs it was perhaps the greatest need expressed in the study with many respondents commenting that lack of time impinged greatly on their work. This was due largely to teaching commitments and administrative tasks.

The biggest problem here is time...time for research, time away from students, time away from thinking about teaching, time away from committees...

While lack of time cannot be minimised (one respondent reported regularly working 70 hours per week), it would be naïve to assume that researchers in other institutions do not have the same complaint.

Time constraints are not confined to research staff but also affect Ph.D. students whose supervisors noted that 'teaching and administrative' duties prevented their progress proceeding as rapidly as they had hoped

(Glasgow Caledonian University (1999). Consequently, requests for timesaving measures featured strongly in responses about information needs.

Given...the pressure on resources, the pressure on time, the most effective support is the ability to assist people to quickly and accurately access the knowledge that they require.

However, this is a greater problem for senior staff (HoDs) and considerably less so for staff coming into post with a high research profile and committed research time. One such researcher reports a 60/40 split in his time in favour of research and 'excellent' support from his head of department. Part of this support is a calculated lightening of his teaching load.

Desktop access One of the best ways to save time is to have desktop access to information and this is something which respondents reported as highly satisfactory. Most reported having access to hardware and technical support appropriate to their needs but there were some problems. Within Caledonian Business School the IT infrastructure is reported to be extremely variable with some people having to endure long waiting times to access full text journals. The service is also said to be working with a shortage of IT support staff.

One researcher involved in contract work in different faculties experienced a vast difference in services available. In one department, access to services was wide-ranging and provided through a well-integrated interface. They operated effectively and IT support was efficient and friendly. In another services were reduced, more cumbersome to use and IT support slow to respond. Such an opportunity for comparison is not always experienced which suggests a limited basis for perceived satisfaction undermining the correlation between reported satisfaction and actual service provision.

Skills Some respondents were concerned about becoming victims of information overload. There is such a plethora of information sources that they can all be rendered useless unless researchers know where and how to look. In the main, respondents were

highly computer literate and experienced in the use of computers in information searching. However, research is an idiosyncratic process with each individual having his/her own preferences. Although this implies difference, researchers are united in having habitual routines for searching that rely on tried and trusted methods. Most do not actively seek new search strategies unless there is a specific problem. There is a danger here that, without regular updating on new resources and the development of new strategies, search skills will become outdated and less efficient in relation to what is available.

These three aspects; time, access and skill are importantly linked. With ready access to the most useful research tools at their desks researchers are well equipped materially but many feel that they lack the time to utilise or develop their skills in accordance with ever-increasing resources while at the same time they do not always identify skills development as a specific or pressing need. When asked whether they would take advantage of courses to update their skills some replied, 'yes, if I had the time' while others felt they worked effectively enough at their present levels of skill. Interestingly, almost all considered it important to build in such courses to the work of research students.

One respondent suggested that research is a creative process preceded by the tedious, routine, increasingly complex and essentially different task of information searching. This sentiment was reinforced by a number of others who made the distinction between searching for material (a routine task requiring logical and practical skills) and making critical judgements of its relevance and the actual thinking process. Although this may sometimes belie a lack of confidence in skill, there was a sense of researchers feeling bogged down by the constant need to keep up - sometimes leading to the decision to give up.

It's not a big ambition of mine to be good at BIDS, I can just about get about. I mean, I've got a driving license but I don't own a car, I know how to drive but I just don't do it

2 How researchers gather information

The short answer is, in all sorts of ways and by almost any means, not all of which impinge on the library.

Library Visits to the Library have decreased markedly among those interviewed and there is some blurring of the boundaries between what the Library provides as an information service and what is provided centrally. When asked about gathering information most people referred to their use of the Internet in the same breath as those services provided directly through the library, while use of the library was still largely identified with a visit to the building or contact with a librarian.

anything that comes to me at my desk I assume is university sponsored...when I'm conscious of using the library as the library it's generally in personal contact and then accessing the catalogue

Hence perceptions of library and information service use can be skewed.

No one pattern emerged with researchers spanning a range of preferred strategies from those that display a high level of competency to the passing over of searching tasks to colleagues with greater skill. One person working in a particularly underrepresented area in terms of library provision reported finding nothing of direct interest to his research within the library stock. Instead, he has accumulated a large personal collection of materials, mainly photocopied articles, institutional records and journals that he subscribes to himself. He relies heavily on his large network of colleagues/contacts which allows him to access what he needs relatively quickly and accurately. He makes little use of inter-library loan and none of electronic journals but considerable use of the Internet. His department is served by the general IT support system but he finds it slow and understaffed and uses personal contacts for many computer queries. He reported the Library staff as friendly and approachable and could identify one librarian as a contact. This researcher might be described as distinctly outward looking in his approach to information gathering at least in relation to the university library.

There are two problematic aspects to this: firstly, the researcher can become isolated from the host institution in terms of his information seeking activity and secondly, he might become increasingly out of touch with what is available within the library and information service and how to access it; development of his search skills may be halted.

Although there are as many pathways to information as there are researchers, some of the services available feature in almost every case. Journals remain a key medium for the communication of contemporary knowledge and at the hub of the research process with one of the main reasons given for library visits being to find quiet working space or to browse the journals.

I think most of your new ideas come from reading the current literature and finding out what's been published. We do a lot of that online now and do it to some extent through the library. But if you look at our department we've started to order inter-library loans like there was no tomorrow so everyone wants journals that just aren't available.

Most researchers highlighted a desire for the library to hold more journals relevant to their needs and even respondents from those departments that are well-served (e.g. Vision Sciences, Nursing) highlighted a desire for access to a wider range of journals. Nevertheless, the attitude is generally positive and sensitive to the financial constraints suffered by the library.

Desktop Time constraints mean that electronic resources are well used by researchers with searching of the Internet featuring to varying degrees and the BIDS gateway service being mentioned most frequently in descriptions of how they find things. Although there is still a general preference for the physical journal the benefit of having immediate access to electronic journals is widely appreciated and most respondents made use of this service to some extent.

The traditionalist in me says it's very good to have a library and books and bits of paper they're a good thing and the modernist in me would maybe say get rid of them all, we don't need them in an electronic age... I don't have an answer, I'm stuck...but I do like physical books...The online databases that we have are excellent, the Ingenta or whatever it's called and Athens is an excellent thing, you get your password and it's great. Some of the journals they don't have is quite annoying but why would they buy a few journals that would only appeal to a few people...but I think more and more journals are becoming online and that'll make things so much better...for the students as well, people can't steal your pages if you've got an online journal which they do with physical journals.

Journals is probably on the top because they're supposed to be the current thinking in the field...it's the key thing that I use...the majority of the ones I need come in full text...I usually print them off without pictures or I cut and paste them into files.

If you're using ABI Inform I think you can get the back issues up to a certain date anyway so that's normally ok. If it's journals that we don't hold, there's quite a lot of new ones that have come out in my field where the back issues are only like two issues ago

Amongst those who use electronic journals regularly a move towards provision of more titles was the most welcome improvement to the service they could suggest as well as regular, easy reference, updates on all titles available. There is simultaneously a reluctance to give up access to the physical journals and this is largely due to concern over access to older material.

The worry I have about the e-journal system is that somebody might say, ok we pull the plug on it today – equally they might cancel the order on it for the hard journal – but there is a feeling of vulnerability with e-journals and I don't know why, I can't even put it into an sort of logical framework but just a sense that the plug could be pulled at any time then you're in a nightmare situation.

The use of other electronic services varies considerably. All respondents reported using the Internet to some degree, most commonly bookmarking favourite sites and using them

repeatedly. While most used the Internet confidently some suggested that help with using search engines would be useful.

Much of the literature research that I do tends to be done over the Internet now. I tend to have sites that I'll go to and see what's new to be honest rather than go to the library. It's convenient, it's sitting on my desk. If I want I can download and print again sitting at my desk. The occasions where I would need to go to the library are strangely few and far between now, I can get most of the information I need via the web. You can get access to current journals and if I find something that I particularly want to find then I'll go and have a look at it. Most of the time I find most of what I need is actually there...I just tend to bookmark the sites and go back and forth as and when.

It's a method that works for me – researchers, if they're anything like me, would find it very useful if they could sitting at their desk access a browser that perhaps they could even customise to some extent...to specify locations, literature searches that they want. You can also develop, I've not done it mainly because I've not had time, but you can also develop 'intelligent agents'...Research staff could come to the library and say 'look, this is my area of research, can you assist me in constructing an intelligent search agent.

Electronic discussion groups do not seem to be well used and one person said he would not be willing to air his ideas publicly to an audience of strangers. One researcher regularly downloads lectures from a colleague in California and listens to them at his desk. This person also takes advantage of web-based tutorials and STILT [Glasgow Caledonian University IT Training facility] workshops and positively seeks to develop his understanding and skills in relation to what is available to him.

Other libraries Most respondents reported using other libraries, particularly those of Glasgow and Strathclyde universities. Again, with time as a keen issue, the ability to search the catalogues of other institutions from the desktop is invaluable and further cooperation between the libraries would be very welcome, particularly in regard to inter-library loan.

Better cooperation between local university libraries was a recurring theme. The suggestion was also made that an online inter library loan form would further streamline the service freeing more research time.

The answer to the question 'how do researchers gather the information they require?' varies tremendously with some regularly exploiting a wide range of new services available to them and others remaining satisfied with familiar patterns.

What has emerged as a key library service to researchers is the academic liaison librarian. While all library staff were reported as friendly and approachable, almost all respondents spontaneously mentioned the name of one person they identify as their library contact. When asked what they do when they encounter a problem finding something they want, the common reply was 'go to Andrea'. When asked how they learned what was available to them or how to use certain services, invariably the reply was, 'I went to Andrea' [not the real name of the person concerned]

I've had any number of contacts with Andrea when she was here and Andrew who's now working with our department and they've been uniformly helpful...take Visual Cognition you know 'does our library have an electronic subscription to Visual Cognition?'. I'll take a look and if I don't see anything I'll give a call - so that's the way I've been using these people's services not...'oh, I'm interested in the way the visual system detects change, can you find some articles for me?'. I'm not sure that's within their remit to do but in terms of the nuts and bolts of doing things...

I'm used to speaking to Andrea...she is very good and keeps me up to date with a lot of things that she finds.

I like the library online service here, it's very easy to use. When I arrived I went over and had a few sessions with Andrea.

I contact Andrea on a need-to-know basis...[re. budget] Andrea is good for that with us at CBS but some departments don't get that level of information.

SUMMARY

In terms of researchers' needs, time, access and skill are the basic requirements. Again time is an issue for the wider university and access in the form of more journal titles, physical or electronic, may require considerable financial commitment. The role of the library and the librarian in the development of skills in information gathering is perhaps less contentious. Researchers feel pressed for time and although many make an initial contact with the library when new to the university or research, the pressure of administration and teaching can render them too deskbound to maintain the personal contact which those who do keep in touch find an invaluable resource for news of improved services. While some may not welcome the intrusion, it has been suggested that the Library might offer a combination of group and one-to-one training to research staff and students built into a programme of staff development, targeted to individual needs and brought into the department.

In relation to the Internet, we saw that one researcher here would like to have help in customising browsers or creating 'intelligent agents' (Ansari 1998; Aradhye 1998; Doyle 2000; Hsieh-Chang and Jeh 2000; Wise 1998) while another wondered if the library might offer training in software such as Endnote. Although funding is a recognised problem the provision of decentralised library staff, the 'barefoot librarian' as suggested by Jacobs (1998), operating at department/discipline level moving away from a reactive centrally based information service, might impact positively on the daily work of researchers. In saying this, the work of the academic liaison librarians was highly praised in the interviews.

The role of the academic liaison librarian not only makes a practical contribution to research activity by advising on 'what to do/how to find' but also bridges the gap between the Library, complete with any of its perceived shortcomings and the researcher. Most respondents were understanding of budget restrictions, knowledge largely gained through discussion with their Library contact. This doesn't make journals materialise but it does bring reason to the situation.

The isolation of researchers is both alleviated by the abundant channels of electronic communication and exacerbated by the centrality of the computer as gateway to these services and the library has become harder to identify amidst the range of services used in research. Successful research activity relies on this diversity, from university IT support to cooperative agreements with external libraries to increased access to electronic sources to quiet spaces and, another less academic request, facilities for coffee in the library. But diversity can bring confusion and the general feeling seems to be that this is best brought under control by a person not another system. For many researchers the librarian is the last port of call when their skill or the system fails them - making them essential to the notion of library as information provider.

Half way through the research period an interim meeting was held to report work in progress to University researchers. It was suggested that the library might develop a research unit which would maintain links with the Research and Commercial Development office. While this idea was not pursued it raised issues which were followed up with the Research and Commercial Development office. (See below)

OTHER ISSUES

The study also focused on the research culture at Glasgow Caledonian University and gave respondents the opportunity to raise issues, which concerned them. Despite improved RAE results in 1996, some respondents expressed dissatisfaction with the research culture in GCU. They feel that this affects the funding decisions of external bodies and their own motivation. Researchers often feel isolated and or undervalued both at departmental level and within the wider external research community. However, individual research efforts are strong and there is a sense of optimism in some quarters. A recent internal study has shown that one in three research funding applications are currently successful which compares well with national standards. At the time of writing the outcome of RAE 2001 is unknown. In late 2000 a Director of Research and Commercialisation was appointed with the result that the

structuring of research and related activity has greatly improved. This has made it possible to plan changes and improvements, some of which are described below. Adverse financial circumstances among research students was also reported and this issue has been referred to the University's Student Services Department for further evaluation and possibly action.

OUTCOMES AND ACTIONS

The completed internal report was presented to the University's Research and Commercialisation Committee in May 2001 and generated lengthy discussion. Among the issues targeted for further investigation/action were:

- the need to set minimum standards of IT provision for researchers
- The need for co-operation between the Library and Research and Commercial Development Office. This will include academic staff training on copyright issues and developing links between the Library's web pages and those of the Research and Commercial Development Office.
- The need to develop Library web pages for researchers
- Electronic requesting of inter-library loans. (this services was provided to staff and researchers from April 1st 2001)

FUTURE DIRECTIONS

The study has raised a number of questions which merit further examination. The crux of the issue is clearly the interface between time, access and skill. What do researchers realistically need and want? Is structured training which is frequently seen as the solution really appropriate, given the constraints on researchers' time and the lack of enthusiasm among some to learn more than they feel they really need? Would an emphasis on intuitive, user friendly interfaces be a simpler solution? Clearly researchers are losing touch with the Library and it could even be argued that the Library is a declining force in their lives. Is this a cause for concern? Although passworded electronic information databases are available to all researchers there is a clear enthusiasm for the freely available Internet, something which is echoed by a recent study at Leeds Metropolitan

University (Hewitson 2000). The study also highlighted that researchers are unwilling to have information gathering strategies designed by librarians imposed upon them, however well intentioned the actions of librarians might be. Again this has to be taken into account in planning support for researchers. Finally there seems to be a dislike of electronic discussion lists. Does this occur elsewhere?

Streatfield, D. (1998) *Access to Research Materials, British Library Research and Innovation Report 147*, British Library Research and Innovation Centre.

Wise, J.M. (1998) Intelligent agency, *Cultural Studies*, vol.12, no.3, pp.410-428.

References

Ansari, N. (1998) 'SDI Processing for search profiles in online databases', *ASLIB Proceedings*, vol.50, no.4, pp.85-87

Aradhya, H. (1998) Recognizing patterns in information retrieval: a memory-based classifier for inferring relevancy, *Artificial Intelligence in Engineering*, vol.12, no.1, pp.99-105(7)

Barry, C.A. (1995) Critical issues in evaluating the impact of IT on information activity in academic research: developing a qualitative research solution, *Library and Information Science Research*, vol.17, part 2.

Bell, A. (1997) The impact of electronic information on the academic research community, *The New Review of Academic Librarianship*, vol.3, pp.1-24

Doyle, J. (2000) 'Intentia adds intelligent agent technology', *Midrange Systems*, Spring House, Feb.7

Erens, B. (1996) How recent developments in university libraries affect research, *Library Management*, 17, no.8, pp.5-16

Glasgow Caledonian University. Research Degrees Committee (1999) *Annual Report: Session 1998/99*, RD99/43/1

Hewitson, A. (2000) Awareness and use of electronic information services by academic staff. *Library and Information Research News*, vol. 24, no. 78, Winter, pp. 17-22.

Hsieh-Chang T. and Jeh H. (2000) An architecture and category knowledge for intelligent information retrieval, *Decision Support Systems*, May

Jacobs, N. (1998) Academic researchers' use of the Internet, and their consequent support requirements, *Library and Information Research News*, vol.22, no.70, pp.30-34