Research is not a four-letter word

CAROL VAN ZIJL

Head: Technical Services, Gold Fields Library
Vaal Triangle Technikon

I know we have all heard about research, and as librarians, researchers are actually very important to us. They come with our job description and possibly occupy quite a bit of our working time.

I want to approach this from a different angle though and suggest that every librarian should personally become involved with research, instead of helping other people to complete theirs.

Research is actually the crux of revitalising information services. By constantly investigating the information needs and information-seeking patterns of our clients, we will be able to adapt our services in line with developing needs. The library's raison d'être is service, whether we like it or not, and the only way this can be done properly is by working systematically to discover what the real situation is in the information world.

Space precludes me to cover the intricacies of research methodology and besides, there are plenty of wonderful books available to deal with this. I merely wish to show how valuable research can be, and to share some practical advice on how research can be used in the fields of librarianship and information science. I also wish to impart the concept that research can be the domain of everyone, whether you are busy with post-doctoral studies, or are trying to understand why people make such a mess of our shelves. Research should never be linked to a certain job level or qualification, it should be the concern of everyone working in a 21st century library.

What is a researcher?

What is your understanding of a researcher? Do you see mortarboards, boring articles, crazy scientists with test tubes, Einsteins, scholarly personages with half-moon spectacles? Yes, I suppose some researchers are like that but very often a researcher is an ordinary person like you and me.

Obviously, I like the idea of research, so let's do a simple test to see if you are a researcher. Give yourself a zero for each 'terror' and a one for every 'interest'. First, what is your reaction to the phrase 'chi-square', then to ex post facto design, then conceptualisation and operationalisation, then grounded theory - how are you doing so far? Then let's look at the question, improving customer service and understanding what makes people tick.

Did you pass? To be quite honest, the first four phrases tend towards the 'terror' side for me, and I think I speak for most of us. However, if you could answer 'interest' to five and six or both, the truth is that you are actually a researcher. Congratulations.

I think many librarians shy away from research because it seems like an incredibly complex process, performed by scholars or management. Some of us are too busy to bother with research. There are any number of reasons why we continue to do our jobs without ever finding out what our clients want, what they really, really want.

Here are some definitions of research:
- careful or diligent search
- studious enquiry; usually critical and exhaustive investigation or experimentation having as its aim the revision of accepted conclusions, in the light of newly-discovered facts
- endeavour to discover facts by scientific study of a subject.

All that is needed is knowledge of a question or problem that should be investigated and then logical thinking to come up with a good way of getting answers to that question or problem.

Some useful research methods

A few methods have proven useful in the field of information science in investigating problems.

Surveys

Probably the most ubiquitous of these is the survey. A survey will always start by identifying a problem or some other interesting development in your library. Or perhaps you would just like to know how satisfied your users are with library facilities and services at the moment. It can be fascinating to see that your clients are not at all as enamoured with, say, electronic journals as you thought because (a) they do not have computers at home or (b) they like to see their information in a more familiar format with a definite

> By constantly investigating the information needs and information-seeking patterns of our clients, we will be able to adapt our services in line with developing needs

first and last page. We found out recently that a large proportion of our academics do not even know that we have some expensive full-text databases for them to use. They had actually been told about them repeatedly, but somehow the information had not seemed relevant to them, so they had ignored it. The marketing of these databases has thus become very important in order to make them more cost-effective.

Now the next step is to read as much as possible about the findings of other researchers relating to the question or problem at hand. This gives a good idea of what kind of questions to ask to make the survey really useful and meaningful. Then you need to decide whether you will rely on interviews for your data, or whether questionnaires will be used.

Should you decide on interviews, will you leave the interview unstructured allowing the interviewee to take the interview into any direction (which could be useful to really get to the bottom of a problem as you do not limit the person to certain avenues of thought) or will you structure the interview by using the same questions and procedure with all the people you interview (which makes the analysis of responses somewhat easier).

An interview can be as simple as paying a casual worker to sit at a table in front of or inside the library to ask every person (or every fifth person - whatever) how often they come to the library, whether they use books, journals, articles, CD-ROM databases, online full-text databases, to rate library staff on a scale from one to five, whether they use the library for leisure or study purposes - whatever your issues are.

Or you might decide to send or e-mail questionnaires to a group of people (known as a sample) and ask them to complete and return these to you. It is a good idea not to make the questionnaire too long, and try at all costs to avoid ambiguities. It's awful to discover that every respondent understood a question differently, because this makes that section of the survey useless. I would suggest that you ask some friends to complete the questionnaire before you distribute them to your sample (a so-called pilot study) because any awkwardly-worded questions and misunderstandings can be corrected in time.

Getting people to return questionnaires requires quite a bit of nudging and urging because many people just couldn't be bothered with your problem, but if you really go to some lengths to convince respondents that they are very important and if you contact them a few times to remind them about your survey, you should get a reasonable response rate. A little humility and crawling-on-the-belly-with-downcast-eyes usually go down well - so do it for 'the cause'. Or alternatively, if you can't resist the urge to be direct with defaulters, ask a more congenial colleague to be the contact person. Take it from one who knows, be very sure that you spell the names of each respondent correctly and get their titles right as well. Respondents are very

touchy - and once you've annoyed them, that's it - you won't get your questionnaire back.

Or you might prefer to ask everybody in the library on a particular day to complete a short questionnaire. This way you would get a better response rate, but you might just choose the day when Aunt Ella's *Mills & Boon* book club decided after their meeting to go to the library, or a particular group of students might have been sent to complete a project. These situations would result in your findings being 'skewed', as they say in Research. Just use logical thinking to try to get as broad and as balanced a view as possible. The ideal is to ensure that every client has an equal chance of being asked to participate in the survey. It might thus be better to hand out questionnaires over a few days, to get more generalised data. Just give your situation some thought before you start your survey - while you're going to the trouble of asking your clients for feedback, you might as well make sure that you get the right kind of data from a truly representative sample.

Now all you have to do is to analyse the data. This means that you have to make sense of the answers you received. I hope that you will find this part of the study as exciting as I do. This is where you get a real picture of the patterns of library use, or whatever. You don't have to go into confidence intervals, t distributions or chi-square procedures unless this is really your bag. You can get a lot of meaningful data just by comparing frequencies (for example, how many times each of possible answers was given) and percentages. The latter is particularly useful because finding 16 out of 200 female respondents prefer to browse for information whilst 16 out of 42 males use this method certainly doesn't mean that the method is equally popular with males and females. The proportion (percentage) of males is decisively higher.

There are even computer programs that can help you to process and correlate your data. One could use a database management program such as MS-Access, an ordinary spreadsheet like Excel, or if you are lucky enough, you could use one of those programs specifically aimed at statistical analysis like SPSS. These are all very useful when it comes to finding out if there is a relationship between two or more questions in the questionnaire. In a survey I conducted to evaluate our user education programme, I was surprised to find that students who had not undergone such a programme were as successful in finding information on the OPACs as were those who had been trained. I thought this was rather odd, and decided to test some other correlations that could be relevant to this issue. The fact was that those who had received training were about 60% more likely to use the OPACs. So, those who had taken the trouble to train themselves managed just fine, but most didn't bother to learn on their own how the system worked, and found their information sources by some other inexplicable method. This is why research is so fascinating - you always come across the unexpected.

If you decided on interviews, the data analysis will be slightly different. You can go into more detail and try to find trends in the responses given to questions. Statistics become less important in this more qualitative form of research. Although many scholarly battles have been fought about the relative value of qualitative and quantitative

> There are any number of reasons why we continue to do our jobs without ever finding out what our clients want, what they really, really want

RESEARCH RESEARCH RESEARCH RESEARCH RESEARCH RESEARCH RESEARCH RESEARCH

research, both methods have value in different situations, so don't even bother to get involved in that argument.

The final stage is to write up a report of your findings and recommendations. Much research carried out in libraries will be aimed at improving services and facilities. Depending on your reasons for doing research, you can decide how much detail must be given about research methods, scientific validity and so on. Even if you feel that scholarly writing is not your strong point, rather carry on with the research project and write up the report in a way that will be understood by you and the parties who need to hear the results, than steer clear of research.

Surveys are, however, far from the be all and end all of research methods you could use.

Transaction log analysis

You could examine the log of queries entered by library users to see what level of training is needed to help them search more effectively. You could see what the main reasons are for unsuccessful searching. It could be that they enter only one or two words, that words are misspelled or perhaps the users don't really understand how subject headings work. Perhaps they need help with keyword search strategies. All of these problems can be picked up from looking at the actual searches entered by clients. Using this method, I discovered that our students are dreadful spellers and in more than 80% of cases, used not more than two keywords in their searches. Clearly some training was needed in search strategies - the spelling we could do little about.

Historical research

Historical research is rather self-explanatory and entails investigating all aspects of a situation or problem in order to come to a clear understanding of how it arose. You would have to track down all relevant primary and possibly secondary sources relating to the situation, then evaluate and synthesise the information to write a comprehensive report.

Comparative studies

You might want to compare your services or collection with those of similar institutions. This is where comparative studies come into their own. By drawing on the best aspects of your and other libraries, you are able to bring about revitalising and innovative changes in your services.

Observation

Even observation is a valid method of data collection. You could observe your users moving amongst your stacks, and keep notes on what they do with the books they look at. Do they make some effort to mark the place from which they took the book and return the book thereafter, deciding they do not require that particular book, do they ask for a particular call number, hone in on that particular book and take it out or do they look at book after book, return them anywhere on the shelf, or leave it in a heap somewhere in the library? An interesting finding in every survey I have done is that library users love to browse through the library shelves to see what they can find. In several cases, this is actually the single most popular way of finding information. Through this kind of observation, you could see what kind of signage you need to make processes easier for clients.

Bibliometrics

Another method of observation you could use is known as Bibliometrics. Although the name might seem alarming and scientific, you could gain a great deal of insight by using this research method. This is concerned with the mathematical and statistical analysis or any kind of written communication. You could gain a tremendous amount of information about the value of your journal collection by studying the bibliographies or lists of sources at the end of theses and dissertations of your postgraduate students. If most of the journals used are not in your collection, and very few of your own journals are cited, perhaps you should re-examine the collection and possibly cancel some titles and start some new subscriptions. I would actually suggest that this exercise is repeated annually or at least every few years to re-evaluate your collection. Another valuable method of doing research, which is very close to Bibliometrics, is Content Analysis where you would examine the contents of some recorded information systematically in order to discover trends.

Conclusion

Although there is definitely a place for scientific research and there is actually a dreadful lack of research in our field of information science on which theory can be built, there is always a need for basic operational research. No library service can develop in line with user needs unless we know what the needs are. If we are serious about our profession and believe that the section in which we work in the library is important, we will know where areas of uncertainty exist, and what can be investigated to bring about innovation and improvement.

Anyone who has read Douglas Adams' **Hitchhiker's guide to the galaxy**, and **Life, the universe and everything** in particular, will know about the SEP. This is a sort of shield that makes it impossible to see anything behind the SEP. As Ford Prefect, one of the main characters in the book, puts it: 'A SEP is something that we can't see, or don't see, or our brain doesn't let us see, because we think that it's somebody else's problem. That's what SEP means - Somebody Else's Problem. The brain just edits it out; it's like a blind spot. If you look at it directly you won't see it unless you know precisely what it is.' And once you decide that something is an SEP, it becomes Somebody Else's Problem and you don't have to think about it further because it becomes invisible. Don't decide that research is behind some kind of a self-erected SEP. Make your own observations of your own problems, and investigate them. You and your clients will be the ultimate winners.

> 'A SEP (Somebody Else's Problem) is something that we can't see, or don't see, or our brain doesn't let us see, because we think that it's somebody else's problem.' ... Don't decide that research is behind some kind of a self-erected SEP

RESEARCH RESEARCH RESEARCH RESEARCH RESEARCH RESEARCH RESEARCH