

## **The workplace research librarian**

*Steve Thornton*

When I qualified as a Librarian, all those librarians who didn't work in National, Public or Academic libraries were "Special". Nowadays the trend is to call them Workplace librarians, but even so I still think that we really were "Special". During the third of a century that I worked as a librarian within the Ministry of Defence's research organisation I often had the opportunity to work as the information gathering component of research project teams (which was a lot more fun than run-of-the-mill library work). Indeed, I consider my development of this role into that of today's Knowledge Agent as my main contribution to the profession. However, in addition to this I had several opportunities to carry out original research projects on top of this normal work – workplace research.

What do you need to be a workplace researcher? Firstly, curiosity. Curiosity may kill the cat, but it definitely creates the researcher. You have to want to know why or how something works, or why it doesn't. You have to get a buzz out of finding the answer – or at least discovering what the answer isn't. If you haven't got that, then don't even get involved.

Secondly, a fairly logical mind. You don't have to be a genius, but open to new ideas and willing to be proved wrong. Finally, it helps to have a reasonably big ego. You may be doing these things for the purist of motives, but in the end you will want to publish your results, and (if you are lucky) present the results at a lovely conference in Hawaii, or Venice, or Chelmsford – well, luck is relative.

Working in a research organisation really helps as well. In my career the management layers in and above the libraries had often been researchers in their own right, and understood the value of identifying new techniques to develop and improve services. They tended to take the stance that since their scientists were leaders in world research, then their Librarians should be involved at the forefront of library research as well. It was just the natural order of things. For a such as NATO's AGARD Technical Information Programme gave us the chance to get involved in international collaborative projects: junior staff straight out of college could find themselves performing pivotal roles in conjunction with colleagues in other countries and on other continents. How many of us can say this even today?

However, the greatest advantage I found was that you were surrounded by the best scientists and engineers in the world, and (if like me) you visited them in their

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### **Author**

Steve Thornton is a retired MoD research librarian, Editor of *Performance Measurement and Metrics* and a Member of the editorial board of the PMM International conference.

E-mail: [Stephen.thornton137@ntlworld.com](mailto:Stephen.thornton137@ntlworld.com)

offices and tea-rooms, you would find that they were friendly, amusing, stimulating and willing to share problems. You often picked up work in this way, but you also found those individuals willing to help you with your own knotty project problems. Like sums. And they taught me the scientific method – something that I subsequently insisted all of my professionals understood.

In its simplest form it is just:

1. Identify a problem
2. Form your hypothesis
3. Design and carry out experiments which test that hypothesis
4. Analyse the results
5. Formulate your conclusions (and tell the world about them!)

Just follow these simple rules - carrying out research is basically this easy. The following examples show how I shambled my way through three typical research or research/type topics.

## **1 Identify The Problem**

For an academic, problems are usually identified to meet a rather selfish end – to form the basis of a good degree, doctorate, make a sponsor happy, keep the supervisor off your back. For the workplace librarian the emphasis is often slightly different, and my forays into research have been driven by slightly different forces. Awareness of what is going on in your profession is a real advantage, and you can always pick up on clues to problems that others are facing which they have found insoluble.

### **1.1 Periodicals**

Some problems were often triggered by the sort of incident that lead to me asking “What the hell is going on?”. My first example came about when the late Chris Bigger called up one day to see if I could let him know what prices we were paying for specific journals. He had been offered a “8% off special deal” by a periodical agent, which seemed a bit odd to him. It was too good to be true – the price we were paying from the same agent at a “12% off special deal” was in fact more than he was being offered. This got us both annoyed. *The key factor here was that I talked to my peers. If you do, you will eventually find that everyone has absolutely unique problems, and most us share those identical absolutely unique problems.*

### **1.2 Impact**

Yes, keeping the supervisor (or in our case, senior management) off our backs is as vital for us as it is for academics. I have always been a strong advocate of being forearmed and demonstrating the value – perceived or actual – of what we do to a whole range of different stakeholders, but it is the senior management who must take priority. Any dumb cluck who forgets that is going to be without a Library to run in pretty quick time. What we needed was a robust tool which would not only

provide us with useful evidence and analysis, but which we could also use to beat our masters with. *It is essential that you must never forget that you have an important role to ensure the survival and growth of your service, and not just to carry out day-to-day duties.*

### **1.3 Cataloguing**

Finally, a practical application and development of someone else's approach. We had at one time a team of cataloguers processing scientific reports. Although their output was gold-plated, several of us on the management team thought their process seemed incredibly cumbersome and slow. However, it was difficult for us to determine how cumbersome or slow. There were no mechanisms to do so, and no real enthusiasm from the cataloguing team to assist us in doing so. *Never ever assume that just because something works that it couldn't work better, or that it even needs to be done at all.*

Identification of a problem is sometimes the hardest part of the researcher's task. Several times now I have come up with pragmatic solutions which worked, without ever really understanding what the original problem was. Only by going backwards have I been able to figure out what was going wrong in the first place.

## **2 Create The Hypothesis**

### **2.1 Periodicals**

How could we, Chris and I, account for such discrepancies in the prices we were paying? It seemed to us that the explanation could be that the periodical agents concerned were honest but relatively incompetent, or downright crooks and liars. *OK, we were cynical old souls even then, but far too many librarians are trusting, gullible mugs. Just because a salesman buys you lunch doesn't make him a good guy.*

### **2.2 Impact**

I had been looking at ways to measure library performance on and off for quite a few years, and I was dissatisfied with the few tools and techniques that I knew about. To bring me up to speed I carried out a competent literature search, and found out that while a lot of great work had been done recently, there wasn't much of relevance to my particular problems. However, a few throwaway lines by Peter Brophy gave me a clue. It might be possible to assess the impact and value of our services by looking at the organisation's outputs. *A competent literature search – not a quick dip into Google – is good practice. I have assorted tales about research projects reinventing the wheel. It is bad enough if scientists and engineers do it, but for a librarian to do it is unforgivable. Believe me, to have beavered away on a problem only to be told in an open forum that someone has already published a solution to the same problem five years before in a journal you profess to read every issue of, is a tad embarrassing.*

### 2.3 Cataloguing

If the cataloguing process was as slow as we feared, each of its steps needed to be defined and measured. *The critical factor here was NOT to assume too much. Gut feelings, my normal way of working, said the process was too slow, but I didn't have to do the job. There might be other factors in play, and only a proper investigation would provide us with the evidence we needed if the Cataloguing Team were to be convinced as well.*

## 3 Design the Experiment

### 3.1 Periodicals

A simple questionnaire was designed listing 50 titles most commonly subscribed to by the Group's members. It asked which Agent was being used, what price was paid last year, and what price was being quoted for the current year. On top of that we asked for any comments. Aslib helped us out, and printed the questionnaire – it looked very professional - and we sent it out to our 400 group members. Easy, cheap, and requiring little effort on our part. *Questionnaire design is a very easy thing to do. Well, very easy to cock-up at least. There are, however, books and articles giving advice and hopefully will prevent you making the same mistakes we have made in the past. Librarians reading books? The very idea.*

### 3.2 Impact

In the Eclipse project reports, it suggested that the service's impact could be measured by looking at the outputs of the organisation. In our defence research organisation the output was the commissioned scientific and technical report. We were involved as a library service in controlling this output, allocating reports their numbers from a central database when completed. By using this as a trigger we could ask the first authors of each report how much each of a range of services had impacted on their ability to do each specific job. *This actually was the fruit of a lot of deep, feet-up-on-the-desk-thought, reading, talking and eventually sleeping. The idea crystallised at about 3:30 am.*

The questionnaire itself gave them a range of 1 to 7 to express that impact, or 0 if they hadn't used it at all. I bounced this around some handy (and intelligent) staff and they convinced me to add a couple of free-text boxes. I didn't think many would fill it in, but a few might, and their comments might be useful. *Goes to show. Talk to people – it's normally free and you don't have to follow what they say. The solutions to at least two major problems of mine have come from folk I wouldn't have expected them to.*

Into the age of computers, and following our merger with the IT folk, it was possible to draw on their keen and willing support to design a web-based questionnaire which we put on our intranet, which would dump all of the data straight into an Access database. Dave and his IT crowd were (and still are) damn good at their job, and made my life a lot easier. The questionnaire itself was triggered by an e-mail sent to the author with a hotlink. *Keep in with folk like the IT crowd. You can do everything yourself, but it is a lot easier if someone can help you with the tricky bits.*

### 3.3 Cataloguing

The first issue was to examine the process in detail, and figure out what all of the steps were. This was a more drawn out task than I had imagined, as it seemed to vary with each person you asked, although we eventually came to a reasonable consensus and produced a flow chart that worked for most things going through the system. *You would think that some things would be a lot simpler than they turn out. To be honest, it was like drawing hen's teeth. To this day I don't know whether it was deliberate obfuscation on the team's part or not. Don't assume what you are told is correct, even if the person is a) expected to know and b) seems to know. Always check.*

Secondly, I wanted a web-based tool, having been impressed by the efficacy of the impact survey questionnaire. I discussed the problem with our in-department expert who said that the problem couldn't be solved using Microsoft, and anyway he was far too busy to help. (The b\*\*\*\*\*d - he didn't last long after that). So, off to the library to borrow "Excel for Dummies" and in about 2 days we had an operational working tool. Not brilliant, but it worked. Mounted on a server used by the team, they could have it open in one window, while cataloguing in another. As they started each stage of the process for each numbered item, they pressed a virtual button, and again when that step was finished. The system recorded each on/off and also the gap between each stage. *Doing it yourself is not always the best answer, and unless you are pretty expert, try to avoid it. However there are times when it can't be got round, and the Dummies guides are a blessing. And, to be quite honest, it can be fun.*

## 4 Analysing The Results

You don't need supercomputers or to be an expert statistician to analyse results. There are plenty of good guides on analysis and statistics that you can lean on, but it is very useful to understand the basics, like the difference between means, modes and mathematical averages. Avoid Chi-square distributions until you can

look at 
$$Q = \sum_{i=1}^k X_i^2$$
 without being baffled. I still am.

### 4.1 Periodicals

Mug that I was, I told Chris I would analyse the results, so it was my name on the return address for the survey. The work involved actually wasn't too onerous. We had 86 responses over an 8 week period, which meant just a few lunch hours to put the results into a spreadsheet – a very early, Mk 1 spreadsheet on a networked computer, but it worked. Not only did we get the pricing information we needed, but lots of very informative comments as well. The results exceeded our expectations, and gave us definite proof that our original hypothesis was correct – there were a load of sharks out there, preying on dumb librarians.

## 4.2 Impact

Over a three month period we sent out e-mails requesting authors to click on the link and fill in the questionnaire. A staggering 51% of the authors did so, which reflects on how well thought of we were. Unfortunately about a quarter of the respondents thought that by sending out the survey we must be in trouble, and marked everything in the questionnaire with the top marks. This was a bit embarrassing, but easily identifiable since two of the questions were mutually exclusive – we couldn't get top marks in both. A bit of rewording – “We are NOT in trouble” – and the problem disappeared. *This is known as Cronbach's Positive Bias. Most of your customers love the library. It may not be very good, or very efficient, or it may be behind the times, but it is theirs, and they still love it regardless. Unlike HR or Finance. Care needs to be taken to either avoid it happening altogether or easily identify and correct if it does.*

The data was dumped into the Access database, which permitted easy analysis, along with the full-text comments. Remember, I hadn't thought that many useful responses would be obtained. Doh! We were stuffed with them. Praise, comments and a few complaints. Some of these needed immediate action, others showed where publicity was needed. The few complaints were investigated immediately, and two were actually justified. The impact rating of each service was calculated, and for once we had a tool which showed us what was really useful and what wasn't. (Subsequent surveys enabled us to compare these ratings which made the data we gathered even more useful.) *If I had any cavils, it would be how not all of the issues highlighted by the results were subsequently dealt with. It was extremely useful identifying faults and problem areas, but unless these are dealt with the same ones appear every year.*

## 4.3 Cataloguing

As I said, the tool I created was not very robust. It worked, but a competent Excel designer would have done a much better job. Nevertheless, I was able to draw out a mass of useful data. Admittedly I had to discard the top and the bottom 15% of the data - apparently some reports were processed in about 15 seconds and others in about 235 hours. What it did show was that the middle 70% averaged a total process time of about 62 minutes (a not unreasonable amount) but still took an incredible 6 weeks to stagger through the system, with almost a week between each stage sat on a shelf waiting for the next stage to begin.

## 5 Formulate your conclusions (And tell the world about them!)

### 5.1 Periodicals

Chris and I decided to present the results at our Group Conference, and we worked out a double act. Firstly we would present the results, and then read out the comments from the respondents. The comments we had back included one unpublished until today: “I wouldn't believe the f\*\*\*\*\* time of day from one of their cleaners let alone anything else those b\*\*\*\*\*s tell you.” I still consider that one of the more lucid and erudite responses in all my years of carrying out surveys. The only problem was that we (the Royal We of the Group Committee,

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that is – but I agreed with it) wouldn't identify the agents concerned since some of the other replies were as actionable as the one above. Word got out among the trade and we had a larger than normal attendance at the conference, with most of the major agents turning up. Even though we had the graveyard slot on the morning after the conference dinner the whole back row was full of agents. The sigh of relief when we announced we would not be naming names was almost audible. Even today there are agents who remember that morning, and I have glommed free drinks on that basis for many years. And very few agents ever attempted to rip off libraries I worked in after this.

It all went down so well that Aslib Proceedings wanted to publish the presentation, and we subsequently appeared in the same issue as Blaise Cronin – and that was my first real professional publication. *Please remember that most Editors are desperate for reasonable quality articles. I know that I am. Even if you get turned down by one, there are plenty of other fish in the sea.*

### 5.2 Impact

The main purposes of this exercise was to a) give the Management Team a rigorous assessment tool on which to base decisions, b) gather accolades and suchlike that would support our case with senior management in the future, c) identify failings and corrective actions required, and d) build an environment where assessment was the norm rather than an imposition. *Letting the whole team see as much as we could was a policy we followed closely. Oddly, some of them saw this as a weakness, but stuff them – it was the way we wanted to do things.*

Analyses and summaries were provided on a monthly basis and actions taken where immediately needed. A full formal report was produced and discussed, and very full summaries made available to all of our staff and sent to all respondents – though heaven only knows how many read them. And, being an egomaniac, I put forward a proposal for the Performance Measurement Conference which was accepted, and subsequently given at Morpeth. *See my comments about journal editors above. Most conferences rarely turn down papers of a reasonable quality. This especially applies to conferences in less attractive locations, or in far flung parts of the world. Or even Morpeth.*

### 5.3 Cataloguing

As mentioned above, our policy was to let all of our staff know what the results of such exercises were. Well, perhaps not all in this case, just the teams involved. A reappraisal of the process was undertaken and the total process time subsequently reduced to a week or so. Quality was maintained, although some staff probably felt they were not being treated as gently as they had been – but an 80% reduction throughput time was incontrovertible. This work formed the basis of a poster presentation which was given at another PMM conference.

## 6 Conclusions

All good papers, and a lot of bad ones as well, have conclusions. So here is mine. I currently edit Performance Measurement and Metrics, and sit on the editorial

board of the biennial PMM conference. I enjoy the company and confidence of gurus of whom I often feel unfit to tie the shoelaces. I get to go to nice conferences, and enjoy myself immensely. All this because I was not afraid to tackle a small research project and learn as I went along. I have been lucky with my bosses, especially the last who kept me on a very long leash and let me get away with things others might have been too frightened to.

Research is fun, and it makes a change from the hum-drum of cataloguing and the rest of the chores. Have a go. It's better than working in a library all the time.

### **And Finally ...**

My papers tend to be detailed descriptions of each stage in the process, including all my mistakes – “warts and all papers” my old boss used to call them. If you want to follow them through, two of them are detailed below.

Steve Thornton and Chris Bigger (1985) Periodical, prices and policies. *Aslib Proceedings*, 37(11/12), 437-452.

Chrissie Stewart & Steve Thornton (1999) The use of an impact survey as a measure of special library performance. *Paper presented at: '3rd Northumbria International Conference on Performance Measurement in Libraries and Information Services', Morpeth, Northumberland, 1999.*

There is a follow up to this paper:

Steve Thornton (2000) Two years of impact assessments. *Performance Measurement and Metrics*, 1(3), 147-156.