

Can they find it? Yes they can (maybe): Results of a materials availability survey

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Abstract

Materials availability surveys are a common part of library benchmarking, particularly in Australia, where the CAUL Materials Availability Survey is an industry standard. Despite their widespread use, their importance as a benchmarking tool is commonly overlooked, and their failings ignored. To meet our comparative benchmarking obligations and to benchmark ourselves prior to the introduction of a new library system, we ran our own version of a materials availability survey in May 2009.

Because the use of materials availability surveys is widespread, we were able to learn a great deal from the experiences of other institutions, which led to the development of a novel approach to the survey we report on in this paper. We conducted an online-only version of the survey; we attempted to pre-empt some of the positive response bias that exists in the CAUL instrument; we asked about searching for materials online, and we questioned our respondents not just about their success, but about their search experience.

Despite our best efforts to understand a wider range of materials availability issues with our survey, we found that (like respondents to other materials availability surveys) our respondents reported mostly on their experiences with books and claimed to be mostly successful. This result is in sharp contrast to our usage statistics and library surveys, which show considerably more use of online content than books, and a lower level of satisfaction with books than with other collections.

Closer examination of our results demonstrates that, in fact, the reported success of our respondents does not correspond to traditional success in a materials availability instrument; many of our respondents reported success despite not being able to access the material they sought immediately. This finding further emphasises the likely over-reporting of success in materials availability surveys more generally.

In this paper we will describe our methodology, noting the variance from the standard CAUL instrument; we will discuss our results with particular emphasis on the difference between reported success and actual success; we will comment on respondents' search experience, and we will discuss the results in light of the changed methodology and findings from other institutions. Finally we will draw conclusions not just on the results of our survey, but also on the success or failure of our revised survey methodology.

Introduction

For all the seismic shifts in information formats, discovery and access, making available to our users the content they want, when and where they want it, is still at the core of library service delivery. Despite this, libraries are not particularly good at tracking and monitoring performance in this area. How many of us can answer with confidence questions like: are our users finding what they want this year? How satisfactory is their search experience? What are the trends? What are the main barriers and shortcomings users experience when looking for information? Knowing the answers to these questions is a key part of managing our services; the materials availability survey is one tool we can use for this purpose.

Materials availability surveys are one of many benchmarking tools libraries use to measure the service they provide to users.[1]. Mentioned in the literature as early as 1976 [2], materials availability surveys have been particularly widely used in Australian academic libraries (see for example [3-8]), perhaps as a result of guidelines such as those issued by the Department of Education, Science and Training in 2000 [9]. Typically, Australian academic libraries have used a standardised materials availability instrument developed by the Council of Australian University Libraries (CAUL) [10]. Recently though, it has become evident that the original survey is no longer suited to the library environment due to the increased prominence of online resources in library users' activities [11]; an alternative instrument was proposed by Parnell and Fisch in 2009 [5].

While the materials availability survey is a long-standing benchmarking tool in libraries, we report on a survey that used a changed methodology: not only did we run our survey online-only and include reference to online materials, we also asked respondents to provide a citation whether or not they had found what they were looking for and to rate their search experience. We also discovered some surprising results that we have not seen reported in other surveys, notably that some respondents claimed that their search was successful even when they could not access the item they were looking for immediately.

In this paper, we report the methodology and results of a materials availability survey conducted at a small, research-active dual-sector institution in Australia. This survey was performed for two reasons: to benchmark materials availability prior to changing to a new library system, and to test a new version of the materials availability instrument developed at this institution.

The remainder of this paper is divided into three sections: methodology, results, a discussion of benchmarking, and conclusions.

Methodology

It is evident from the literature that the standard CAUL instrument is no longer useful to determine availability of materials in a library that provides material in both physical and digital formats [5, 11]. Like Parnell and Fisch [5], we wanted to use an updated version of the survey that reflected the widespread use of online resources; we also wanted to use an online-only survey (as LaTrobe University did in 2007 [5]).

Our reasons for using an online-only version of the survey were threefold: survey design, bias, and convenience. Online surveys offer some advantages in survey design over paper-based surveys; these include the ability to create pathways through the survey (that is, participants are presented with only those questions which their previous answers have shown to be relevant) and the ability to require participants to answer certain questions before moving on [12]. We took full advantage of these features, and as a result presented a survey to users that was clear in its requirements and (compared to a paper survey) simple and short to fill out. Given that we maximised the use of these features, presenting the same survey in paper form would have introduced a variable we were not testing (that is how amenable people are to completing complex paper surveys) and thus created bias in the survey results. Finally, results that exist in an online form are easily analysed, while paper results require data entry prior to analysis, making online surveys highly convenient.[12].

In addition to using an online-only survey and allowing library users to tell us about their experiences with online resources, we changed the CAUL instrument to correct native response bias. The CAUL instrument requires those who did not find what they were looking for to answer a greater number of questions than those who did, thus significantly biasing the survey toward positive responses as the length of a survey is inversely correlated with completion rates [13]. Not only does the CAUL instrument require unsuccessful searchers to answer a greater number of questions than those who were successful, one of those

questions asks them to provide a citation for the resource they were seeking, and providing an accurate citation is a difficult task for researchers [14, 15] and students alike [16]. Our survey required participants to provide a citation regardless of whether they found the item they sought. The general outline of our survey is described by Figure 1. Even the measures we instituted will not eradicate bias towards reporting success entirely, however; those who are successful [17] or engaged in socially approved activities [18, 19] are simply more likely to be willing to complete a survey about their success or behaviour. Nonetheless this change balances the survey for those who do choose to complete it, successful in their searches or

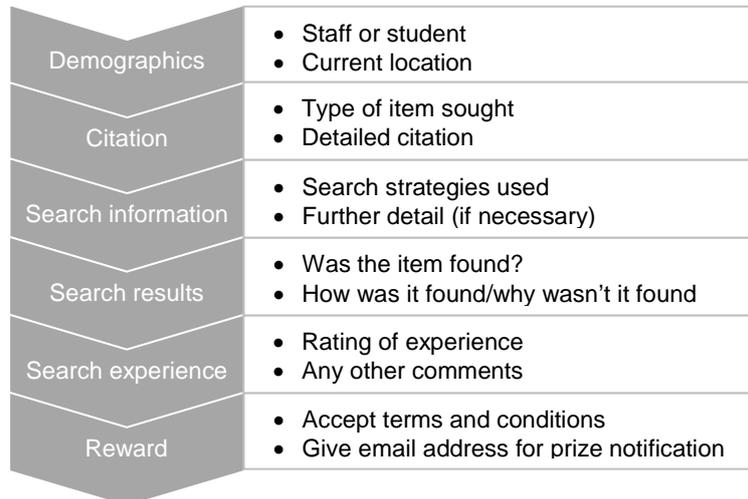


Figure 1: Our survey process

The final novel feature of our survey is the rating of user experience we asked respondents to provide: this was intended primarily as a benchmark of search experience leading up to the change in library system.

To minimise response bias (where interested respondents are more likely to respond), we offered a reward for participating in the survey: respondents were offered the opportunity to enter a prize draw for one of three double movie passes.

As is customary during materials availability surveys, we had library staff verifying the cases where a respondent claimed not to be able to find the physical item they were interested in. This was done every hour during library opening hours, and as such may not be perfectly reliable; a significant number of respondents did not provide enough detail about the item they couldn't find for staff to verify the availability of the item.

Results

The results section will be presented in two parts: the results of the survey itself and a discussion of the incomplete surveys.

Survey results

In this section we will give respondent demographics, outline what respondents were looking for, comment on their success, and examine their perception of the search experience.

Demographics

422 respondents started the survey, but only 304 completed it (completion rate 65%: this is discussed in further depth in the section titled 'Incomplete Surveys'). Survey respondent demographics are described in Table 1 overleaf.

As we would expect from our usage statistics, higher education undergraduates are the largest respondent cohort. Given what we know about library use patterns, TAFE students are actually over-represented in this survey; heavy recruiting by liaison staff explains this anomaly. Respondents were given a range of options to describe where they were when they were searching for the item in question, from 'in the library' to 'overseas'; results are shown in Table 2 below.

Table 1: Respondent demographics

Patron type	Number of respondents	Percentage of respondents
Academic staff	6	1.97%
Corporate staff	6	1.97%
Higher education postgraduate	53	17.43%
Higher education undergraduate	126	41.45%
TAFE student	103	33.88%
TAFE teaching staff	5	1.64%
Other (please explain)	5	1.64%
	304	100.00%

Table 2: Respondent location

Respondent's location	Number of respondents	Percentage of respondents
In the library	168	55.45%
Off campus somewhere in Australia	50	16.45%
Somewhere else on campus	84	27.63%
Overseas	1	0.33%
Total	304	100.00%

What users were looking for

Respondents reported their experiences searching for a range of items, see Table 3 below:

Table 3: Items sought

Item type sought	Number of respondents	Percentage of respondents
A book	226	74.34%
A conference paper	1	0.33%
A journal article	31	10.20%
A newspaper article	7	2.30%
A video or DVD	27	8.88%
Other (please specify)	12	3.95%
	304	100.00%

This result does not reflect what is already known about the use of academic libraries, where online materials tend to get the highest use [20-22]. One possible reason for the over-representation of books is the significant number of responses made within the library itself—libraries, do, after all, lend themselves to thinking about books [23]. Similarly, libraries are heavily associated with 'books, d'uh' [23], and given that it was evident that the library was running this survey, respondents may have been primed to talk about their experiences with books.

Table 4: Search strategies employed

Strategy	Number of searches	Percentage of total searches	Number of unique searches	Percentage of unique searches	Users employing strategy
Library catalogue	240	65.75%	199	78.97%	54.52%
Library database	52	14.25%	26	10.32%	7.12%
Google	45	12.33%	15	5.95%	4.11%
Google scholar	6	1.64%	1	0.40%	0.27%
Other internet site	10	2.74%	3	1.19%	0.82%
Other (please explain)	12	3.29%	8	3.17%	2.19%

More interesting perhaps is how users sought their items of interest, with 52 users reporting use of more than one search strategy (the largest reported number of strategies was 4). Table 4 (above) shows the frequency with which each strategy was employed (unique searches are those where no other strategy was employed):

The predominance of searches employing library catalogue is somewhat unexpected, though respondents' knowledge that they were responding to a library survey is likely to have engendered bias. Also significant is the small number of users who reported Google as a source: less than 5%. Again, this result is likely to have been affected by the fact that this is a library survey, but it still stands in stark contrast to results from other research, which shows that students and academics alike turn to Google first [24, 25].

It is possible to examine how users sought different types of data, seen in Table 5:

Table 4: Search strategies by resource type

	Total searches	Catalogue searches	Percentage using catalogue	Database searches	Percentage using databases	Google searches	Percentage using Google	Google Scholar searches	Percentage using Google Scholar	Other internet site searches	Percentage using other internet site	Other searches	Percentage using other searches
Book	226	200	88.50	23	10.18	23	10.18	2	0.88	5	2.21	8	3.54
Conference paper	1	1	100.00	1	100.00	1	100.00	0	0.00	0	0.00	0	0.00
Journal article	31	14	45.16	19	61.29	6	19.35	4	12.90	1	3.23	0	0.00
Newspaper article	7	2	28.57	2	28.57	5	71.43	0	0.00	0	0.00	1	14.29
Video or DVD	27	19	70.37	5	18.52	4	14.81	0	0.00	2	7.41	2	7.41
Other	9	5	55.56	2	22.22	6	66.67	0	0.00	2	22.22	1	11.11

Of particular note in this table is the fact that just over 45% of users searched for journal articles in the catalogue, a search strategy which is unlikely to be successful. This finding reflects the literature on library information seeking, which shows library users struggle to find journal articles. [25-27]. Upon close examination of the results of this survey, we discovered that 15% of all searches for journal articles used only the catalogue, and 5% of searches for books used only the databases; these unconventional resource choices demonstrate a lack of understanding of the divisions between search interfaces, and could represent a number of failed searches. This finding also reflects the literature on library information seeking; users are frustrated by siloed information sources [28], and will choose the resources which are easiest to use, even when they know they may not provide the best information [24, 28, 29].

What users found

We asked users to answer the question 'did you find what you were looking for' with a simple 'yes' or 'no' and thence to provide more information about the finding (or not) of the item of interest. 242 respondents (79.6%) said that they did find what they were looking for; 62 respondents (20.4%) said that they did not.

The division between finding and not finding is not as clear cut as it might at first seem, however. Consider the case of a book which is available but on another campus: some library users would define this as not finding the book because they wanted it immediately, while others would be satisfied that they had found the book knowing they could place a hold and it would reach them in a matter of days. As such, an affirmative answer to the question 'did you find what you were looking for?' is not so much a measure of material availability as it is a measure of respondent satisfaction. When we examine how users succeed and fail to

access what they were looking for, we get a much clearer picture of both traditional materials availability and respondent satisfaction. Upon close examination of the data:

- 27 people said they did find what they wanted, but in fact placed a hold on an item they wanted immediately;
- 21 people said they did find what they wanted, but in fact placed a hold on something they were happy to collect later;
- 2 people said they did find what they wanted, but were not able to access it immediately.

So a total of 50 people said they did get what they wanted, but were not able to access it immediately, and conversely:

- 3 people said they didn't get what they wanted, but were able to access it in a format that was not their preference (e.g. found a e-book where they wanted a physical book);
- 10 people said they did not get what they wanted, but when their search failure was checked by staff, staff were able to find the relevant item.

So 13 people said they did not get what they wanted, when it was, in fact, available to them (it should be noted that this may have been true in many other cases where respondents said they didn't find what they were looking for, but a significant number of these did not give enough information in their citation to verify whether or not the item was unavailable). These findings leave us with a true availability rate of 67.4%, a 70.7% satisfaction rate (those who felt their information needs had been met satisfactorily, even if they couldn't access the item immediately) and a 79.4% reported search success rate.

We examined a number of factors that may have affected success (including academic background, search source, item type and number of search strategies), and discovered very little of significance. We did discover however that:

- Students were statistically significantly more likely ($p=0.02$) to report success than staff. This does not mean they necessarily are more successful, it could also be that they are less willing to report failure.
- Searches where databases were consulted were more likely to succeed than fail (at the 10% confidence interval, $p=0.075$), and searches that consulted 'other internet sites' were more likely to fail than succeed (again at the 10% confidence interval $p=0.074$).
- Respondents' location had no statistical effect on their perceived success (i.e. whether they responded 'yes' when asked if they found what they were looking for), which suggests that library users are resigned to limited access to physical materials from outside the library at the outset of their search.

How users failed to find what they were looking for

Table 5: Perceived reasons for search failure

Perceived reason for failure	Respondents	% of respondents
Couldn't find it	19	42.22%
Missing, lost, on loan or on order	7	15.56%
Not on the shelf	4	8.89%
Not available at this location	4	8.89%
Not the right format	3	6.67%
Problems accessing online content	6	13.33%
Didn't look after all	1	2.22%
Other	1	2.22%

The reasons respondents gave for search failure demonstrate scope for improvement by the Library, largely in terms of making our resources more findable. Respondents' perceived reasons for failure are shown in Table 6 above, but it is clear from free text comments that some users were irate at not being able to find what they wanted, saying, for example, 'there is no copy in reserve!!! What the hell is wrong with this library??' and 'there is no copy at Lilydale. I think that all campuses should have all books, especially when they are used for subjects at that particular location'. In fact in both these cases there was a copy of the book in question available to the searcher, clearly demonstrating that the search experience available to users was not effective in helping them to find what they were looking for.

How users felt about their experience

For the most part users reported high levels of satisfaction with their search experiences, giving them a mean rating of 3.94 (out of a possible 5)—median 4. When we break this rating down according to search success, unsurprisingly we discover that those who did find what they were looking for were more satisfied (mean rating 4.07, median 4) than those who did not (mean rating 3.20, median 3, see Figure 2).

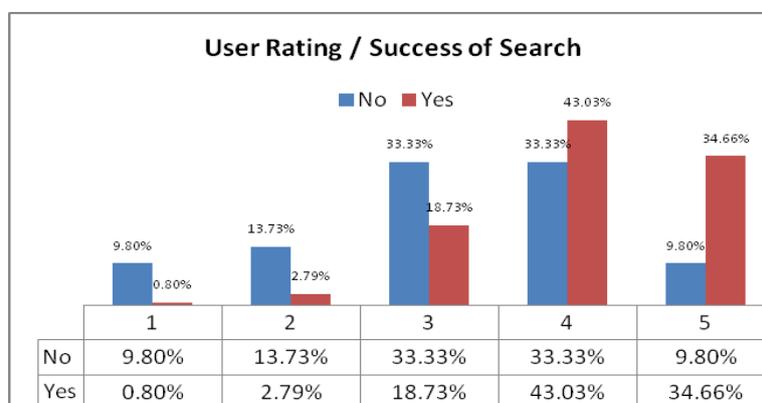


Figure 2: Search experience rating according to search success

When we examine the 75 free text comments users left on this survey, some of the areas where users are dissatisfied with their search experience become apparent: among these 75 comments 21 include negative discussion of the catalogue, 6 negative references to the databases, and 12 negative references to the shelving (positive comments 13, 1, and 0 respectively). These free text comments provide insight into where we can improve our search experience, but should not be taken as a complete assessment of the search experience as survey respondents generally only make voluntary free text comments on issues they feel strongly about.

Incomplete surveys

Analysing incomplete survey responses can tell us something about which questions respondents are reluctant to answer. Table 7 overleaf shows common stopping points for this version of the materials availability survey:

Table 6: Stopping points for the survey

Information given	Respondents	% respondents
None	1	0.66
Demographic information only	4	2.63
Location given	32	21.05
Item type given	95	62.50
Citation given	3	1.97
Success/failure given	3	1.97
Success/failure reason given	2	1.32
Search experience rated	12	7.89

The two most common stopping points are giving an item type and providing a full citation. It is reasonable to suspect that those respondents who did not give an item type were investigating the survey without a known item in mind. The fact that the majority of those who did not complete the survey stopped at the point where they would have had to provide a citation, however, bears out our initial assumption of bias in the standard materials availability instrument: respondents who did find what they were looking for did not have to provide a citation in the standard instrument, and not facing this considerable stumbling block will have meant that successful searchers were more likely to complete the survey than unsuccessful searchers.

Benchmarking

The materials availability survey is primarily a benchmarking instrument, and should be used for monitoring the performance of an institution over time and for comparing performance to other institutions. Table 7 shows our performance, both as perceived by our users, and in terms of real availability:

Table 7: Materials availability at other libraries¹

Institution	Year	Mean Availability (%)
La Trobe University	2005	81.0
<i>Respondents' reported success rate at Swinburne</i>	2009	79.6
Deakin University	2001	79.5
University of Wollongong	2005	77.0
University of Wollongong	2009	76.7
La Trobe University	2003	76.0
University of Wollongong	2003	73.0
Bond University	2005	71.0
Bond University	2003	69.3
Griffith University	2001	69.0
University of Wollongong	2001	69.0
University of Queensland	2002	68.0
Griffith University	2000	68.0
<i>Actual availability rate at Swinburne</i>	2009	67.4
University of Queensland	2000	67.0
RMIT	2007	64.0
University of New South Wales	2000	63.0
Bond University	2002	57.2

It is evident that our users were satisfied comparably regularly, but that our actual availability appears to be fairly low. Typically this outcome would reflect poorly on the institution, and we would need to assess our collection development policies. In this case, however, we have tested a new version of the materials availability survey which has almost certainly reduced the positive bias seen in the standard instrument, and thus our results are not comparable to those gathered using the standard instrument. We hope to see other institutions use a similar version of the instrument in the future, and thus produce comparable results; meanwhile this survey has provided us with valuable information against which to benchmark our new library system.

Conclusions

In our survey, we aimed to benchmark our performance prior to installing a new library system, but also to trial a new version of the materials availability instrument. The new version of the instrument had three major differences from the old version: it was conducted entirely online, it asked all respondents (rather than just unsuccessful searchers) to provide a citation to reduce bias, and it investigated user experiences of searching, as well as their success rates.

¹ Information in this table gathered using the Council of Australian University Libraries Performance indicator Web Page, <http://www.caul.edu.au/cgi-bin/indicators>, accessed 2 July 2010 [17].

During this survey we discovered that while real availability was relatively low (67.4%), our users were for the most part happy with the access they had to resources, with 79.6% of respondents saying they did find what they were looking for. This confirms that immediate availability isn't always essential for user satisfaction, and that while there is still certainly room for improvement, not all of that improvement needs to come from collection development.

The new approach to the survey was quite effective: we garnered considerable information about our users' experiences with search that can be benchmarked against our new library system. The online modality of the survey worked very well for us making it easy and simple to share and analyse data, and to design a consistent survey. Finally, the incomplete responses to our survey provide support for our decision to require a citation from all respondents to reduce inherent survey bias. We have conducted a successful materials availability survey and had interesting results that provide some scope for improvement in our collection and services. We also trialled a new version of the materials availability instrument, and found it to be effective and likely more accurate than the standard instrument.

The most important aspect of this exercise is the longitudinal benchmark and tool which it provides for us to help us evaluate and understand the impact of our new discovery system. We have already seen spectacular increases in some types of usage; for example, since the introduction of the new system, access to our owned Ebook library (EBL) titles has increased by 63%, while usage of titles which we had not as yet purchased through the user-driven model increased 153%. At the same time, our physical loans increased only marginally. We anticipate that the next iteration of our version of the materials availability survey will help us understand the areas of user behaviour that usage statistics alone cannot provide.

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