The benefits of resource discovery for publishers: a librarian's view

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Abstract

A core goal of librarians is to maximize usage of the content to which their libraries subscribe. Webscale or resource discovery systems offer a single search box for library users to access subscribed content. This article examines usage data at the University of Huddersfield to show how resource discovery has helped to increase the usage of publisher content, which has been made available to discovery vendors and considers the implications for publishers who are yet to do this. The article concludes that resource discovery systems have effectively levelled the playing field, allowing small to medium sized publishers to make content discoverable to users, and encourages publishers who do not have their content indexed in resource discovery systems to speak to discovery service vendor in order to do so at the earliest opportunity.

Keywords: Summon, Resource Discovery, Publishing, metadata

Introduction

This article is based on a paper presented at the 2014 ALPSP International Conference; the paper was given as part of a panel session, 'Cracking the discovery code' (1), which aimed to take an alternative look at discovery services from the views of publishers, librarians and discovery service vendors.

The statistics used in this article are taken from six years' worth of COUNTER data from the University of Huddersfield, which in 2009 became the first UK customer of ProQuest's resource discovery system, Summon. Summon was launched at the beginning of March 2010 alongside the existing federated search solution before a full launch in July 2010 in time for the 2010/11 academic year (2). This paper will look at a number of different types of library resource and how usage was affected by the implementation of resource discovery. It is hoped that the results shown will encourage small to medium sized publishers who do not have their content indexed in resource discovery systems to make contact with vendors at the earliest opportunity. As such, although this paper will look exclusively at the effects of Summon implementation at one University. In an environment where library budgets are becoming increasingly stretched due to cuts in funding, the use and value for money of a title could influence the decision to renew or cancel. However, it should be stressed that except in the direst circumstances, usage is never the only metric that a library will use to make a renewal/cancellation decision (3).

The University of Huddersfield is a medium sized university in the north of England of approximately 23,000 students. In the 2014 UK Research Excellence Framework (REF), the university rose 29 places to be ranked 68th in the Research Power league table. Research power is the number of researchers submitted to the REF multiplied by their combined 'grade point average'. In 2013 the University of Huddersfield was named Times Higher Education University of Year.

Resource discovery and their impact on libraries

Webscale or resource discovery systems have been on the market since 2009 (4). Summon from ProQuest (then Serials Solutions), was quickly followed by offerings from EBSCO (EDS), Ex Libris (Primo) and OCLC (WorldCat Local) and these systems are now the leaders in the industry with almost 9,500 library subscribers between them (5). Essentially resource discovery systems "…harvest all of the relevant sources of data, normalize them into a single metadata schema, and index all of them together in one large union index. This approach offers huge advantages in speed and in the logic that can be applied to the presentation and sorting of results" (6).

Resource discovery should not be confused with knowledge bases and link resolvers. Resource discovery allows users to query pre-harvested content with a single search interface; this requires that the full text of publisher content is indexed within the discovery system. Knowledge bases and link resolvers use standards such as KBART (7) to find appropriate content. One of the issues is that although, "knowledge bases are increasingly positioned as an integral component of a broader set of inter-related products from each vendor" (8), they can also be treated as standalone systems. Therefore, a publisher needs to have content and metadata indexed in both the resource discovery system and the knowledge base in order to maximize exposure of content, there is little point in being indexed in the discovery system without a way to link through to the content via the knowledge base/link resolver.

When first launched, Breeding noted the attractiveness of resource discovery, but commented that, "it will only be through the experience of the library users that these products will either prove themselves or not." (9) Five years on, libraries are beginning to provide the evidence. In a blog post entitled '8 things we know about web scale discovery systems in 2013', by Aaron Tay, Senior Librarian at National University of Singapore, commented that webscale discovery services increase accessibility of e-resources and will

“definitely on the whole increase full-text downloads” and that undergraduates “generally love discovery services”. In support of these statements Tay points to the growing body of literature supporting this (10). However, it should be noted that Tay also states that some faculty staff and librarians do not all share the same view.

A number of studies are now being published on user search behavior around discovery tools (11, 12, 13). As these tools become more embedded, this research will prove invaluable to resource discovery vendors, libraries and publishers alike. Research after their respective Summon implementations at Edith Cowan University Library in Australia (14) and at Huddersfield and Northumbria universities in the UK (15) support Tay’s claim about the views of undergraduates. One quote from an undergraduate in the Huddersfield/Northumbria study corroborates the Australian research findings regarding a single search box and simple uncluttered page: “You’ve not got as many fiddly bits to do; you just type in what you want. It’s almost like Google Scholar, so I like it for that.” The Huddersfield/Northumbria study also found that postgraduate researchers and senior academic staff found the single search box easy to use and the quality of the results to be of use.

Tay’s second claim around the increase in full text downloads is now being widely reported from libraries that have implemented resource discovery. Grand Valley (16) and Manitoba (17) Universities saw a dramatic increase in full text downloads for e-journals and a drop in Abstracts and Indexes (A&I) use after Summon implementation. In another study, University of Texas at San Antonio (18) saw full text article downloads increase by 23% after Summon implementation. These increases in usage are not restricted to Summon customers, after implementation of WorldCat, Local Old Dominion University also saw dramatic increases, the “…lowest amount of usage in a single month for the year of 2011 was higher than the highest usage month in 2010” (19). Furthermore a study of an EDS library, “confirmed the introduction of a discovery tool has a strong positive effect on e-journal use” (20). Indeed, a recent study Levine-Clark, Macdonald and Price (21) found that, “discovery service was the strongest statistically significant variable predicting change in journal usage” and that the ‘big 4’ resource discovery systems all led to an increase in usage when compared to a ‘no discovery’ control group.

In times of increased financial pressure on university libraries, full text article downloads play an increasing role in a library’s ability to demonstrate value for money. However, this is not just to make decisions on cancellation, a number of studies in the UK (22), Australia (23) and the United States (24) have shown that there is a link between undergraduate e-resource usage and attainment/retention. The Library Impact Data Project in the UK investigated usage data of over 33,000 undergraduate students across eight UK universities. This research demonstrated a statistically significant relationship between library resource use and level of degree result (although it should be noted that library usage and student attainment do not have a causal relationship). In addition, research by Tenopir and Volentine (25) found that, “Journal readings obtained from the library account for a significant proportion of academics’ reading activity and often directly facilitate research and teaching.” This research gives libraries an opportunity to argue for resources to support increased use for both undergraduates and researchers, if the discovery system helps to increase usage of publisher content, then this can only be of benefit to all.

Methodology and results

The examples below show a selection of resources to which the University of Huddersfield subscribes, this is not an exhaustive list of all resources, it is merely a selection to illustrate the effect of the introduction of Summon on specific types of library resource – namely big deals, society publishers, publishers not indexed in Summon, full text aggregated databases and A&Is.

All statistics show either COUNTER Journal Reports (JR1) or COUNTER Database Reports (DB1) depending on the resource in question. In order to compare year on year all results show the full academic year (August-July). Data from Summon itself and Google Analytics

have not been used in this paper. Subscriptions to these resources were maintained throughout the dates shown and no large increases or decreases in content took place, with the exception of Figure 2, which is explained below.

All publishers and aggregators have been anonymized in order to prevent comparison between publishers as this is not the remit of this article, rather it is to show the impact on usage on each resource pre and post Summon implementation at Huddersfield. The publishers used are all well-known and publish peer reviewed journals, the databases and A&Is used are also mainstream resources and are subscribed to be a large number of libraries.

The first sets of usage data show three anonymized big deals, the first of these (Figure 1) is a well-established deal that appears to be relatively unaffected by the implementation of Summon. Apart from an anomaly in 2009/10, usage has been steadily increasing for the past six years. This single publisher big deal pre-dates both resource discovery systems and federated search and was often referred to directly by librarians alongside A&I resources as a starting point to search for any content, this may account for its high usage base in 2008.

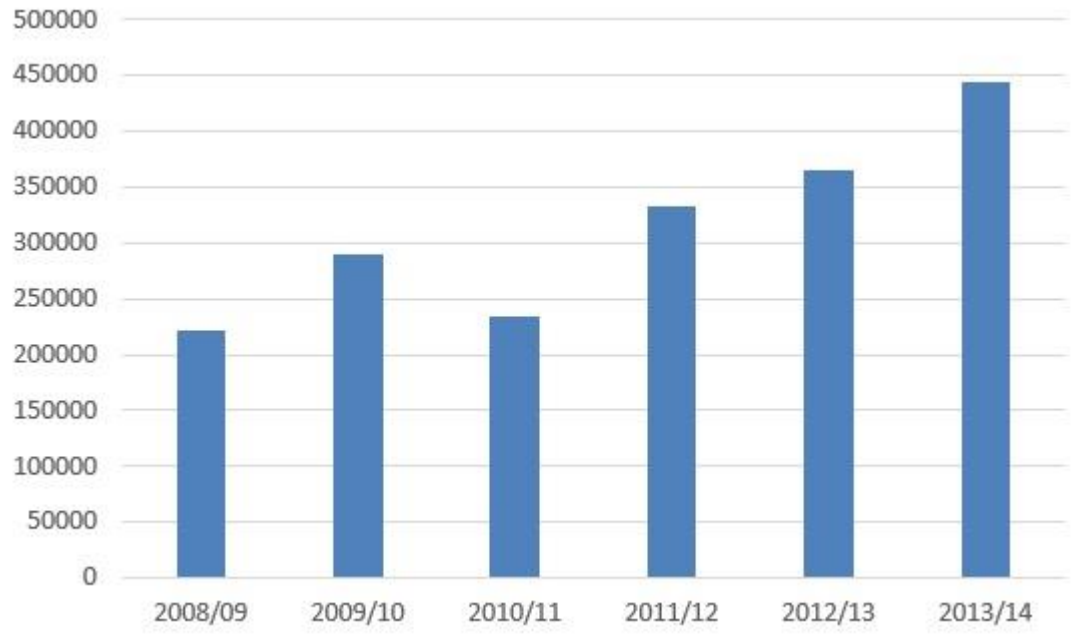

Figure 1. Big deal 1

Figure 2 shows another well-established single publisher big deal that was also used as a starting point for searches in business disciplines, alongside business databases such as EBSCO Business Source Complete. There was a significant drop in usage the year Summon was fully implemented (2011/12). In 2012/13 a larger collection was purchased that included engineering titles.

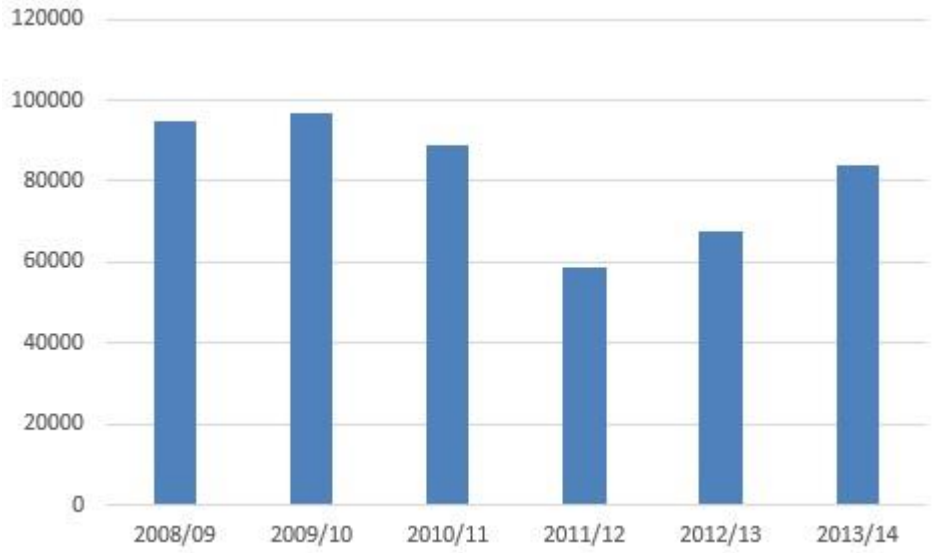

Figure 2. Big deal 2

The third of the big deal data shows another large publisher that was less well established. Unlike the first two examples, this publisher was never promoted as a resource to start a search. Indeed it was on a potential cancellation list for 2010/11 due to poor usage in previous years. Post Summon implementation usage improved dramatically. In comparison with Figure 2, this particular big deal contained a number of business resources that were not being used as heavily used pre Summon.

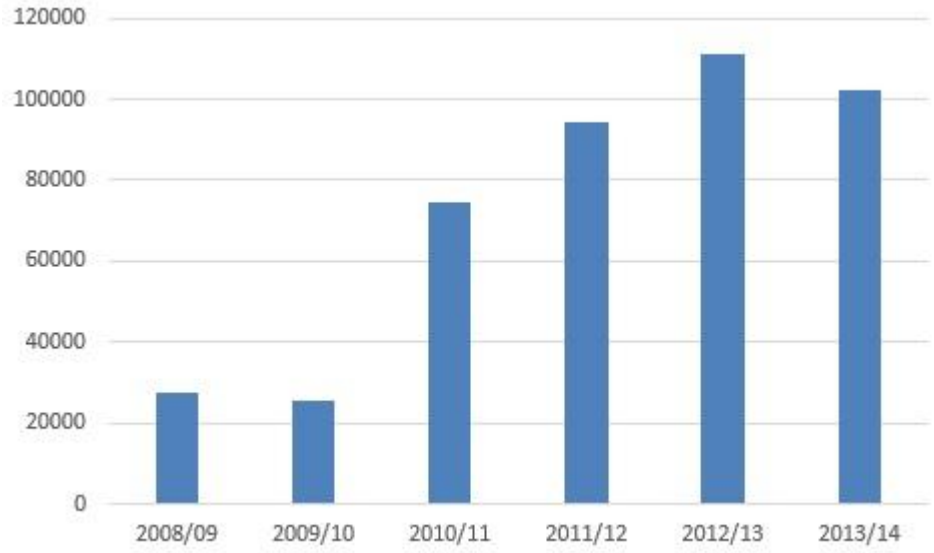

Figure 3. Big deal 3

Increase in usage has not just been confined to the large big deal. Figure 4 shows the increase in usage of a society publisher. Usage was fairly constant up to the implementation of Summon in 2010 when it started to rise steadily. This particular society publisher covers one major STEM discipline and is a well embedded research area at Huddersfield.

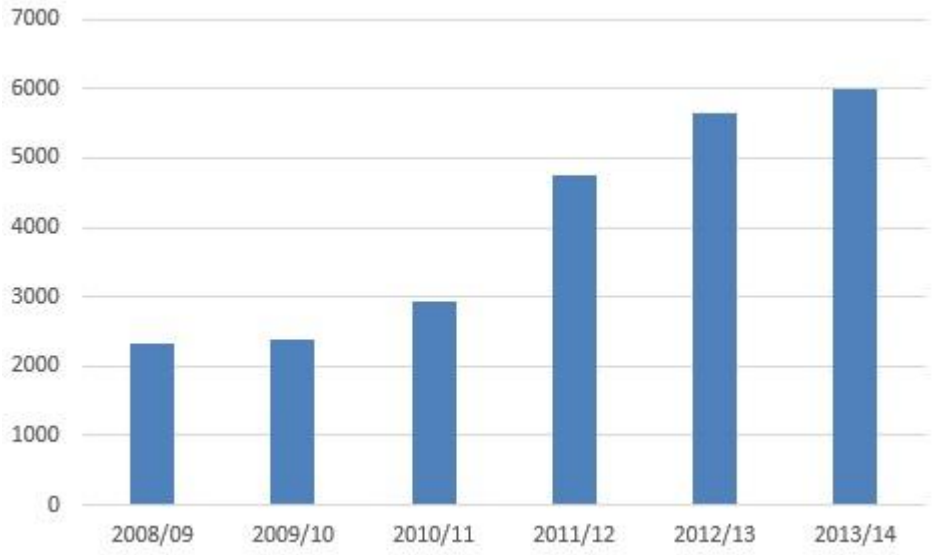

Figure 4. Society Publisher

In contrast to the other examples, figure 5 (26) shows a publisher that did not have its content indexed in Summon. Usage peaked in 2008/09 (the year before Summon was implemented), fell the year of the beta test and then sank to pre-2004/05 levels of usage in 2010/11. After consultation with the School, the resource was eventually cancelled.

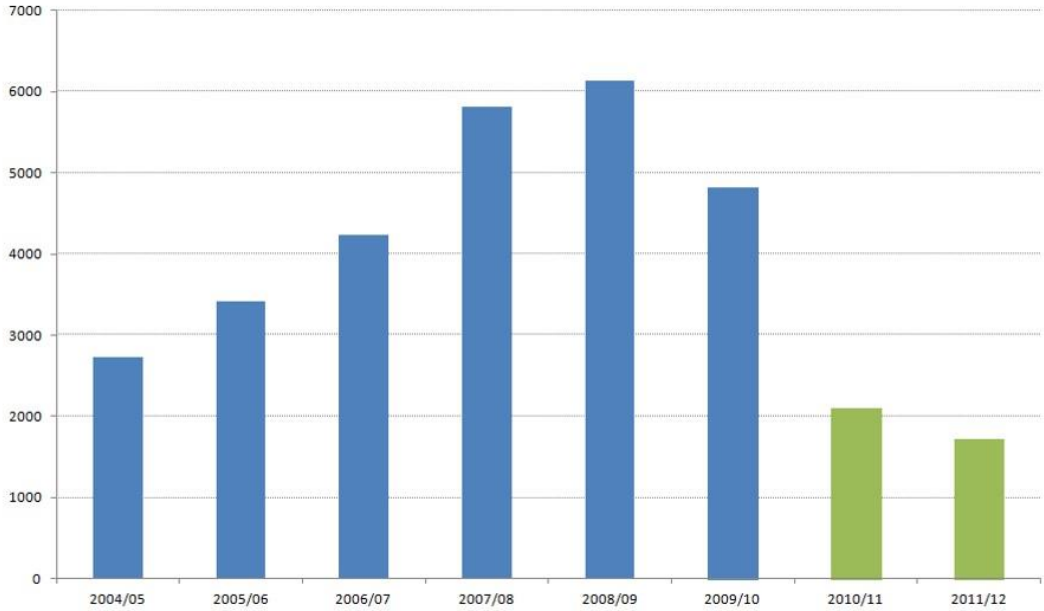

Figure 5. Publisher not indexed in Summon (used under a Creative Commons Attribution-ShareAlike License) (26)

Figures 6 and 7 show contrasting data. Figure 6 shows a full text aggregated resource that also had its content indexed in Summon (and was discoverable through the link resolver). Apart from a small dip in 2010/11, usage has steadily increased, with the biggest percentage rise (27% between 2010/11 and 2011/12) directly after the implementation of Summon.

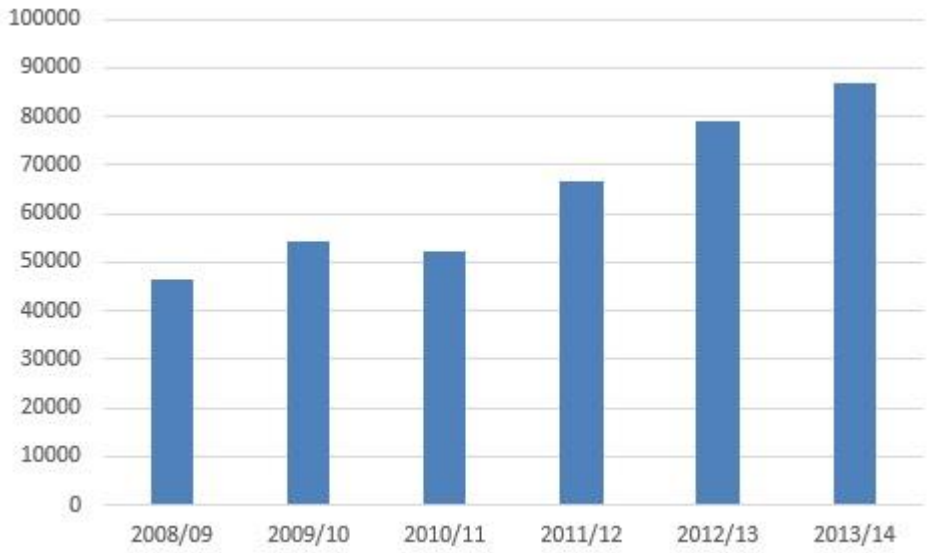

Figure 6. Full text aggregator indexed by Summon

However, figure 7 tells a very different story, this aggregator did not index its content in Summon. The content was indexed in Summon by the original publisher enabling discovery, but the subscription to the content was via the aggregator. Discrepancies at the link resolver stage meant that the content could not be retrieved by users. A work around was implemented at Huddersfield but usage has never fully recovered and this aggregated resource still features regularly in user complaints about broken links and missing content.

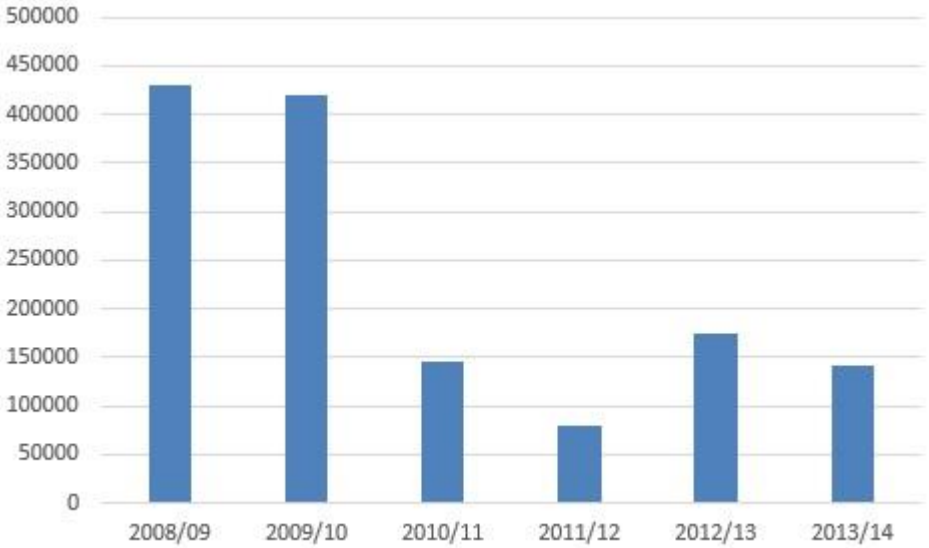

Figure 7. Full text aggregator not indexed by Summon

Finally, figure 8 shows the impact of Summon on multidisciplinary A&I databases. As can be seen, usage was on the downturn for a number of years before the implementation of Summon, and this has been a concern for A&Is for some time. However, in 2010/11, and after the implementation of Summon, usage fell to such an extent that this resource was cancelled very quickly as the library had to react to a cut in its information resources budget, which meant that multidisciplinary A&Is were cancelled in favour of full text resource such as those shown above.

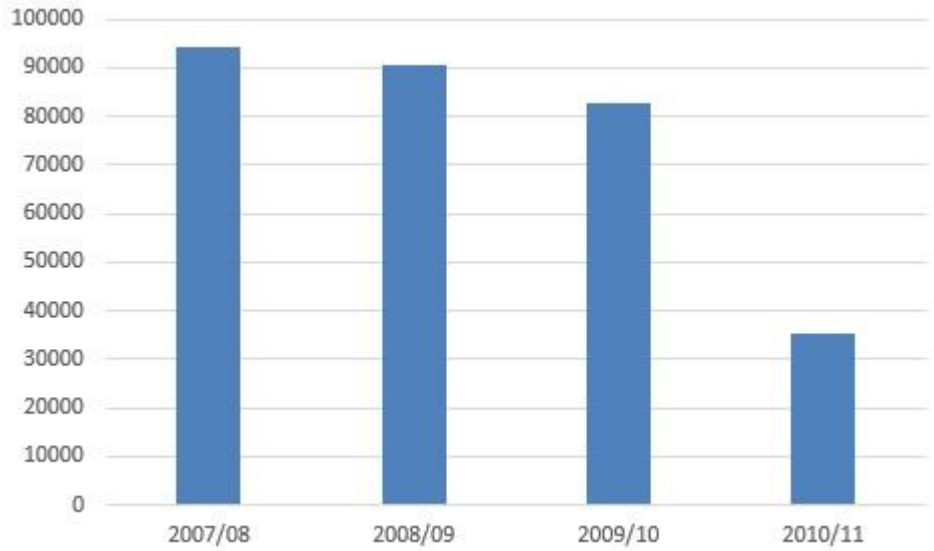

Figure 8. A&I database

Discussion and analysis

While this article does not seek to claim that there is a direct correlation between the introduction of a resource discovery system and usage of particular resources, the data above supports the literature and implies a link between the implementation of Summon and changes in the usage pattern of some resources at Huddersfield. Although the graphs above represent a small selected sample of resources at Huddersfield they do show usage over a 5-6 year period, whereas the data from Grand Valley and Manitoba (16, 17) only show the years directly before and after resource discovery implementation. The implication here is that not only does the Huddersfield data concur with examples of usage increase and decrease in these studies; it also shows usage trends over a longer period of time and the resulting benefit to publishers who make their content available to resource discovery.

Journals

Figures 1 and 2 show usage for two big deals that were both used alongside A&I databases as initial starting points for literature searching. As a result, both had good levels of usage before the resource discovery system was implemented, indeed their high usage predates the federated search system used before the implementation of Summon. The first big deal is a large multidisciplinary publisher and it can be seen from the data that Summon seems to have had little impact on usage, which is still increasing at a fairly constant rate. The second big deal, a specialist business publisher, which was almost exclusively used as a first port of call by Business School faculty and students, has clearly been affected by the implementation of resource discovery, in that usage has decreased. The implication here is that users who would have gone direct to the publisher platform are now searching Summon and finding relevant content from other publishers. It should be noted at this point that usage of all resources at Huddersfield is still increasing, it is not the case that lower usage of this resource is due to decreasing usage across the board. In addition numbers of undergraduate, postgraduate and staff have risen in the Business School over the past five years.

Figure 3 shows the positive effect of Summon on publisher platforms that were not previously promoted as resources themselves, but available only via A&I databases and federated search. Since the implementation of Summon, usage has been transformed. This publisher was then removed from the ‘danger list’ of possible cancellations and is now seen as an integral part of the collection. The same is true of the society publisher shown in figure 4, usage has nearly tripled in six years with the biggest increases being around the time that

resource discovery was implemented. It appears that content was not as discoverable pre Summon for the society publisher and the final big deal example.

For smaller publishers that do not make their content available to resource discovery systems, figure 5 shows a fairly bleak view. This particular publisher did not make its content available and the results were significant. Usage slumped after the implementation of Summon; this also coincided with a period of intense pressure on the library budget. With both costs and usage for other resources increasing, something had to give. In this case, after consultation with faculty, this publisher deal was cancelled.

Aggregated full text databases

Figures 6 and 7 show contrasting results for aggregated full text databases. Firstly one that makes content available to resource discovery seeing an increase in usage (Figure 6). The results here are similar to those found at Grand Valley (16) and Manitoba (17) where resources such as JSTOR, Project Muse and Academic Search Premier all saw increases in use. This information could also be of benefit to publishers who make the full text of their content discoverable in this way. By contrast some aggregated full text databases have not indexed their content (Figure 7). Aggregated full text databases are an area of intense competition, often with a considerable amount of overlap. Therefore, if budgets are squeezed, resources such as that shown in figure 7 are at considerable risk of cancellation where overlap may exist with another subscription, or cheaper competing aggregated resource.

A&I Databases

The decline of abstracting and indexing services predates resource discovery, partly due to overlap with aggregated full text databases. Data from Huddersfield supports previous research at two other Summon implementations (16, 17), however, recent research from an EBSCO EDS user found that there was a marked increase in A&I use (20). In the Huddersfield example, due to budgetary constraints, many multidisciplinary A&I databases were already at risk, as the library would prefer to keep full text over an index of potentially unsubscribed content. As the library was not in a position to continue with a subscription, it is not possible to say whether the implementation of resource discovery would have led to a continued drop in use, in this case resource discovery may merely be a catalyst in the process, but is not the cause. This has not been the case with all A&Is, specialist resources such as CINAHL and SciFinder have seen little decrease in use and are still vital to their subject areas as they perform a different role to faculty.

Implications for publishers

There are a number of clear implications for publishers that do not make their content available to resource discovery systems.

A single search box is very attractive to both undergraduates and researchers, however, this may mean that data not indexed in the resource discovery systems, such as financial data may remain undiscovered (27). The same will hold true for publisher content that remains outside of resource discovery. Although it may be clear to libraries and publishers that the content is of high quality, this does not guarantee use, as can be seen in the above examples. The data in figure 5 illustrates this and could mean the potential cancellation of a title or package and therefore loss of revenue for the publisher.

Inclusion in resource discovery systems is also becoming one of the checks that libraries make when a new title or package is requested by faculty. TERMS (3), which has been widely adopted by libraries in the United States, the UK and Finland has produced a list ‘top 14 deal breakers’ in order to encourage best practice when licensing electronic resources. One of the deal breakers is the ability to use the resource and resource records with third party discovery tools, that is, to be able to search for articles within the resource in a discovery system.

Another crucial lesson for publishers (and aggregators of published content) is to make sure that the metadata is of high quality and that there is a connection between the full text indexed by the resource discovery service and that which is held in the knowledge base for use by the link resolver. Unless this information matches up, the article may be discoverable by users in the discovery system only for them to be thwarted at the link resolution stage.

As has been demonstrated by the examples in this article, resource discovery systems such as Summon really do act to level the playing field for article discovery. As long as each publisher's content is indexed, and this metadata is of sufficient quality there is no reason why a small-medium sized publisher cannot see some of the gains in usage that the above data has shown. In conclusion, this article echoes the findings of the longitudinal study by Levine-Clark et al (21) in that publishers must engage with all discovery services to ensure their content has maximum exposure to library users.

One such way for publishers to engage would be to refer to the National Information Standards Organization (NISO) Open Discovery Initiative (28), which makes comprehensive recommendations for best practices for content providers, both primary publishers and secondary databases to enable successful linking. To fail to do this is to introduce significant risk to future subscriptions.

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