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Out of Sight But Not Lost to View: Macquarie University Library's Stored Print Collection

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Abstract

Macquarie University Library's decision to include an automated storage and retrieval system as part of its move to a new Library building in 2011 has allowed the location onsite of all Library holdings and obviated the need for offsite storage to manage issues of competing demands for collections and client spaces. As we reach the 2-year mark from the commencement of storing 80% of the Library collection in our Automated Retrieval Collection (ARC) we are reviewing our success measures and looking at what our clients' use of the ARC is telling us about their resource needs and their adaptability to new methods of discovery and access.

Introduction

On 25 July 2011, after nearly 45 years of operating out of a 1960s building, Macquarie University Library moved into a new, purpose built library with an innovative method of high density storage for its print collections. The incorporation of an Automated Storage and Retrieval System (ASRS) in the new Library building allowed us to "minimise the environmental impact of the building while at the same time providing space for almost double the number of physical items (2.3 million items) and more than doubling the client seats (3,000) – all in a new library that is roughly the same overall size as the old one" (Brodie, 2012:8).

The ability to store 80% of the Library's lesser used resources onsite in the ASRS solved the 'space crisis' and promoted enhanced wayfinding and browsing of the currently used parts of the print collection, within the framework of a single integrated collection. In this article we describe the experience of Library staff and clients with the new collection storage model and examine what the past two years of ARC usage tells us about our clients' resource needs and their adaptability to new methods of discovery and access.

Background

Macquarie University was established in 1964 as Sydney's third university with a founding cross-disciplinary vision. Opening in 1967, the University Library has been "widely seen as embodying this vision" (Kattau, 2012:18) and Macquarie continues to be a one-library campus. Since then the Library's collection has grown to 1.8 million print and electronic items. Although new acquisitions are increasingly electronic – with 80% of the 2012 book vote spent on electronic resources – there is a continuing, albeit slower growing, print collection. Humanities subject areas in particular continue to require resources that remain

print-only, and there is some continuing academic preference for print editions of monographs.

Over the years the efforts to pack more and more in to the original Library building resulted not only in overcrowding and encroaching on student spaces but on a proliferation of collection 'locations'. Originally created to locate the physical whereabouts of material divided by format (eg. AV, maps), and special purpose (eg., Curriculum), these lost all logic as additional physical locations were often a result of how and where we could create storage areas; a situation that became very confusing and complicated to explain to our clients.

In response to usage patterns, and later the move to online journals, serial holdings were moved to a series of runs of in-library Stack compactus. The temporary reprieve from over-crowding was at the cost of a continual need for, and investment in, re-spacing and updating location codes. In 2005-2006, 75,000 volumes, comprising duplicate copies of superseded editions of monographs, and print serial holdings for serials available via publisher archives, were moved to an offsite storage facility. While small withdrawal activities occurred over the years, including weeding of duplicate monographs from some subject areas, academic sensitivities, our awareness of the general academic resistance to weeding and, in more recent times, highly publicised public criticisms of other Australian libraries' mass weeding projects, discouraged this approach. As a one-library campus Macquarie didn't face the issue of managing duplicate serial runs experienced by libraries at multi-library or multi-campus universities.

By 2006 it was clear that a new approach was required and the then new Vice Chancellor's challenge to the University Librarian was: "Find a way to build us a new Library for about the same cost as renovating and extending the old one!"(Brodie, 2008:3). The solution chosen was to build a new library building containing an Automated Storage and Retrieval System (ASRS), a high density storage solution located within the Library building. In an ASRS the collection is stored in a climate controlled vault in metal bins according to size in multi-story metal racking with robotic (crane) retrieval. Requests for items in the ASRS are placed via the catalogue or discovery tool and available for pickup within a short time at a designated collection point. These systems have been installed in over 20 sites internationally, mostly in the United States and Canada, but the Macquarie University system was to be the first installation of such a system in the southern hemisphere. The system chosen, HK (now Dematic), was chosen because of its existing interoperability with the Ex Libris Voyager system in use at Macquarie since 2002. With the agreement to include an ASRS in the new Library and collection usage data which suggested that "20% of the physical collections satisfy 80% of the usage, we designed our ASRS with storage capacity for 1.8 million items and open shelves with capacity for 500,000 items to facilitate browsing" (Brodie, 2012:9). Macquarie's ASRS project is detailed in Brodie (2008) and Peasley (2012).

The incorporation of an ASRS in the new Library building would allow us to hold all material onsite (including bringing back material from offsite storage), to manage both current and forecast growth for the next 40-50 years, and to improve collection wayfinding. A set of Collection Storage Principles to guide the location of items in the new library was developed in 2008 and communicated widely to the University community. The aims of the Principles were to: "provide an overall explanatory framework for the approach to collections location management in the new library; guide location decisions at the item level – which items

would go on the open shelves and which items would go in the ASRS; and assist clients in using the physical collections by simplifying the layout" (Kattau, 2012:19).

The underlying principles for collection storage in the new Library were that: locations are easily managed and communicated to clients; the ASRS is managed and communicated as an integral/easily retrievable location; and that all physical items also available electronically are stored in the ASRS (Macquarie University, 2008). Within the new Library the open shelves would contain those resources that could be identified as supporting current teaching and research (defined as acquired or circulated/used in the past five years) including high demand material (reserve and frequently consulted reference materials), and "representative items from specific disciplines" that "provide a 'pathway' through a discipline or are representative of discipline", including disciplinary classics, collected works of major authors and "other items identified in consultation with academic staff" (Macquarie University, 2008).

The primary collection storage principles for items in the ARC are:
- All bound and non-current (more than two years old) serials
- Monograph titles not circulated or purchased in the past five years
- Earlier editions of titles in the Open Access Collection
- All items that require equipment to view or use

Following the development of these principles, a consultation process was undertaken in 2010-2011 with each of the University's 34 academic departments to explain the implications of the application of the Collection Storage Principles at the disciplinary level and to collect feedback and any requests for 'exceptions' (change of proposed location). To allow us to set this disciplinary application in context, subject collection profiles were produced for each discipline, analysing the existing scope and development trends in the Library's collection for each discipline and detailing the proposed location (open or ARC) of the relevant disciplinary resources. The consultation process and collection profiling are described in Kattau (2012). Agreement on the application of the Principles was gained from each consulting academic department, with the consultation discussions resulting in the identification of some representative disciplinary items not picked up through statistical analysis, and a small number of re-location requests were received and actioned.

Our process of actively engaging our users in determining collection location was in line with our overall approach to collection development, as we have both active collection development partnerships with our Faculties and a largely patron-driven model for selection of new resources (via an academic proposal process for new book orders and journals/databases subscriptions). Lucker has noted that the suspicion of off-site storage solutions is also a suspicion of a statistics-driven decision-making process in deciding which items to send to store. The author notes, "By involving users in the process of choosing which items go off-site, the library is able to foster a sense of trust and transparency, and to gain buy-in from the audience most affected by the use of off-site storage" (Lucker, 2012:288).

Although at Macquarie we were only sending items to an onsite store (so presumably less threatening), the importance of building and maintaining trust through sharing our data and processes was one that we well-appreciated. The resulting limited requests for location transfer both during the academic consultations and since the settling in to the new Library

show that goodwill is gained as much through a process that garners trust as over outcomes. To provide assurance and promote the idea of one integrated collection the name 'Automated Retrieval Collection (ARC) was developed for the material located in the ASRS. "This removed the mention of storage, which may have had negative connotations, and avoided any misinterpretation of the purpose of the system" (Peasley, 2012:4).

Storage and Retrieval: Records, Tagging and Barcoding

Our discussions about the storage principles for our onsite storage mirrored in part those in the literature about findability and access of material sent offsite (see Reeves and Schmidt, 2011; Ilik, 2012). Like many libraries, our catalogue records were at varying levels of detail, in particular serial records. While onsite storage provided speedier retrieval we wanted to ensure the retrieval of the right item and to avoid as much as possible double-handling in retrieval, such as requiring a request of a separate index volume first to identify a needed volume or having to retrieve a whole set or run to identify a needed volume. In developing the storage principles provision was made for publication types where in-hand browsing was more crucial to the findability of information within. This included multi-volume works and works with separate indexes, which were specified in the Principles for open location. Our goal was to minimise, as far as possible, any differential findability between an item located on the open shelves and one in the ARC.

Thinking about storage principles, and what would go where, proceeded in parallel with planning the logistical aspects of moving the material into the ARC, and in particular how to make the physical transfer efficient so as to minimise the disruption in access to material and to ensure it would all be loaded into the ARC in time for the new Library opening. Since space efficiencies in high density storage are obtained by storage into the most appropriate bin size (to accommodate book height), a process of tagging (colour flashing, with a separate colour for each bin size) all material in the collection was carried out. This had the advantage of not only letting the removalists know what went where but, as the tagging progressed through the collection, it flagged to our clients the proposed location for each item. At the same time as the tagging, the system location was amended in the library management system.

Between the end of 2008 and early 2011 all monographs were processed for ARC and open locations and serial volumes processed and barcoded. While monograph processing was fairly straight-forward, the requirement of separate barcoding of each serial volume (or pamphlet box),– required for later requesting, meant our serial volumes had to be barcoded for the first time. This involved the manual handling of each volume to check the catalogue record and holdings information and add item records for each bound volume or pamphlet box. Titles with catalogue records that had not been updated with changes of title were corrected as we came across them. The necessity of good serial title and holdings records for offsite, or in our case onsite, storage has been noted by Ilik (2012) and Reeves and Schmidt (2011) among others. The risk of 'losing' material stored with inadequate catalogue records is "especially true for serials, since they are more likely to be associated with complex cataloguing situations and subtleties" (Ilik 2012:351). Enhancement of monograph records included a particular effort to enhance the records of our CJK (Chinese-Japanese-Korean) holdings as usage analysis placed the bulk of this material in the ARC. As a result of the barcoding and flashing processes we had a very clear understanding of the state of our collection. For example, items that had not been touched in our flashing processes were

likely to be missing. At the end of the relocation to the new Library, we found the 'loss' rate was 1.6% which we considered a not unreasonable figure over 45 years.

One of our collection storage principles for the new Library was that "locations are easily managed and communicated to users" (Macquarie University, 2008). The move to the new Library allowed us to dramatically reduce the number of locations. The 45 separate collections in the old Library became 17 in the new Library, although these 17 collections were actually located in one of only 5 places: open shelf collection (including Reserve as a temporary collection); Automated Retrieval Collection (ARC); Curriculum; Map; and Brunner. The new open shelf collection included, in an integrated run, the previous general main collection, the former East Asia collections (CJK language material), and a number of formerly distinct reference collections. Separate collections were maintained for maps (due to special storage cabinetry), the Curriculum Collection (classroom support materials for trainee teachers), and the Brunner Collection (a specialised and restricted access Egyptology collection governed by original acquisition conditions).

Within the ARC, we retained 8 named individual collections: ARC; Closed Access; ARC Curriculum; Map; Palaeo (a restricted palaeontology collection governed by original purchase conditions); Rare Book; ARC Reference; and Thesis. Although all of ARC may be seen as a 'closed access' collection, we have maintained the original distinct collection names within the ARC for practical, that is tied to either access restrictions or lending (eg., in-library use) conditions, and communication reasons. This was thought to be particularly important for the thesis collection as this format is typically either specifically wanted by a client, or specifically excluded from a search by a client.

The ARC began loading at the end of February 2011 and between then and the opening of the new Library ARC retrievals were collected several times a day and brought back to the old Library for client collection. With the official opening to the public on 3 August 2011 access to items in the ARC was organised as a 'service' from the new Library's Resource Collection service zone which also manages Document Supply pick up and other mediated loan services). The service was launched with an advertised 30 minute turn-around time between request and collection, and staff rostered to the service zone can view the log of waiting requests ('picks'). Items are held for 3 days and, depending on the type of item, access is managed through either an assisted general loan, a library-use only loan, or handed to the client for self-checkout. This process underwent some refinement during the first 18 months of operation, particularly around mediated lending of ARC items. Although turn-around times have been consistently within 30 minutes, we have retained the advertised time, deciding that "it was prudent to under-promise and over-deliver" (Peasley, 2012:4).

Initial client response to the new Library and the ARC

Our proactivity in collecting and analysing client input and feedback on the new Library and the ARC continued after the move. A 'First Impressions' survey carried out in August 2011 was aimed at capturing client expectations and any "gaps between their expectations and the reality" (Peasley, 2012:7). Feedback from this and other targeted 'new Library' feedback forms, both online and paper, have been monitored for comments on collection discovery and access. While student facilities such as seating, printing and wireless access have

dominated feedback overall, there has been some, although declining, feedback specifically about the collections.

In September 2011 we conducted our regular Insync survey which received 36 comments (out of 1166 survey responses with comments) related to the ARC and shelf browsing, largely, although not entirely, negative about both the idea of the ARC and respondents' first experiences with it. As the survey coincided with a period of technical problems, this was not unexpected. In October 2011 the student newspaper published two articles on the new Library, one entitled 'A library without books is bizarre' (Hitzeman, 2011) and the other lamenting that the "era of browsing is gone" (Beeby, 2011). However, across the range of new Library feedback collected in the first six months of opening (apart from Insync) only 13 referred to the ARC in negative terms.

By 2012 the feedback received by the Library relating to the ARC had decreased to eight items of feedback. One continuing theme has been the inability to browse the audio-visual collection, with one client advocating that DVD display needs "to be more like a visit to the video store – at the moment it's just like buying something online" (Client feedback supplied to the Library 2011). While we are sympathetic to this sentiment, our DVD collection is designed to support the teaching and learning needs of our staff and students rather than recreational viewing, and ARC storage for DVDs is supported by our academics. Clients have also queried the advertised 30 minutes retrieval time. In practice "the actual time taken to retrieve an item is less than three minutes and as the ASRS is located in the library directly behind the service desk, we are able to retrieve items almost immediately if necessary" (Peasley, 2012:4). While client feedback on turn-around times has tailed off – regular users will know that this is normally much quicker and plan their time accordingly – it is probably time to review our 'under-promising' to meet the expectations of new cohorts. Client feedback has also helped us clarify our policies and procedures. For example, feedback relating to confusion for registered community users on whether they have access to online ARC requesting has been addressed and staff will place requests for walk-in, non-registered users.

We are also finding that our clients are taking advantage of the requesting process outside library opening hours and we have built the processing of overnight requests into the workflow of the first service shift. Some clients admit to us that they much prefer the new system. Where previously clients were only able to place holds on copies that were out on loan (ie recalling those items) so that 'available' items had to be physically located on the shelves by the client before borrowing, with ARC material they can request an ARC item through the catalogue and by the time they arrive at the Library the item is available for pick up.

Unlike students who are more likely to provide feedback via our print feedback forms or online feedback links, our regular liaison and consultative activities with academics mean we typically receive feedback from them via personal discussion. One of our regular users has let us know he is trying to beat the ARC but has so far been unable to walk across to the Library from his nearby office before his ARC request is available for collection. In an example of how our new model is becoming the 'new normal' we recently received a request to have additional materials in a particular subject classification transferred to the ARC so

that students could more clearly see the curriculum-related and key disciplinary works on the open shelves, while specialist and historical interest works could be found via the catalogue and discovery tool. While the value and academic buy-in of our open shelves disciplinary pathway approach is evident in this request, it also shows an increasing awareness of the limitations to call number browsing of the physical collection as the primary source of discovery (Barclay, 2010:53).

The concept of legacy collections was raised often in our academic consultations. As defined for respondents in Genoni's print storage survey, legacy print collections are "collections of print items that are in very low circulation or demand but which may nonetheless retain some research value. The term includes both serial and non-serial publications" (Genoni, 2012:27). Our academic consultations showed that academics were very aware of the extent to which a university library's collection consists of such legacy collections, even if they want to ensure that 'legacy' does not equate with 'disposable'. As one consulted academic in our Arts Faculty noted, "just because I remember that volume fondly from my early teaching career doesn't mean that it still needs pride of place on the open shelves" (Client feedback supplied to the Library 2010).

ARC – What our clients are using

So what does our data about ARC usage tell us about our clients' resource needs and their adaptability to new methods of discovery and access? ARC requests ('picks') have been tracked since the opening of the new Library and have gone from an average of 67 requests per day (with a high of 120 requests in one day) in the 10 months of 2011 to an average of 74 requests per day in 2012. These numbers are well within forecast range to ensure advertised turn-around times can be met. They also provide assurance that the application of our collection storage principles did achieve their goals and correctly identified material for ARC location.

Not all picks have converted to loans, and while further research is needed to analyse all the factors involved, observational and anecdotal evidence suggests that this has resulted from: the series of process changes during the period (eg., changes to lending requirements for library-use items); some on-going staff retrieval of items for processing; and the failure of some clients to claim their requests, perhaps because it is too easy to make them! While a system message advises that a request has been successful at the time the request is made, we are currently unable to send availability emails or pick up reminders. We do receive apologies for failure to collect.

The record of actual items circulated from the ARC provides a lens through which we can understand client resource needs and how they discover and access resources. ARC serial loans account for less than 1% of circulated items and the number of distinct serial titles accounts for around 40% of that figure (809 serial titles out of 1888 circulated ARC serial volumes). We have found that our clients have not opted for requesting print volumes where we have online holdings. The more highly requested serial titles are either: titles not available online (largely in ancient cultures, one of Macquarie's core research areas, and including a high proportion of non-English language titles), older government document serials, and Macquarie's own publications (historical calendars and annual reviews). The decision to store all formats requiring viewing equipment (DVDs, other AV and microforms)

in the ARC, and the regular demand for these, particularly DVDs, has meant that a sizeable percentage of all ARC requests are for this material. Macquarie theses are also all stored in the ARC. As a consequence, there is a higher proportion of loaned to stored items for AV and Theses.

Table 1. A comparison of stored and circulated material by type - July 2011- February 2013

	MQ Theses	AV	Micro-form	Maps	Ref	Books	Serials	Non-serials Total	Books and serials
ARC items loaned	375	3,713	135	7	37	16,761	1,888	21,028	22,916
ARC items stored	7,881	24,673	6,023	1,073	11,324	760,210	254,214	811,184	1,065,398
% of ARC items loaned	4.8%	15.0%	2.2%	0.7%	0.3%	2.2%	0.7%	2.6%	3.3%

Reports from the Harvard model offsite storage facilities (high density shelving with manual retrieval, first developed by Harvard University in 1986) "consistently report annual circulation in the range of 1% to 2% of stored volumes" (Payne, 2007:10). These facilities most typically store low-use runs of serials or archival collections. While our circulated items data are not substantially outside that range, it is interesting to note that our data illustrate the contrast between serial item circulation (0.7%) and monographs (2.2%). It is the latter figure that we feel provides assurance that our users are approaching the ARC as part of an integrated collection.

While it is not possible to draw any specific conclusions on client end use of requested monographs, the range of requests by subject, publication date, and publication type suggests that our clients are indeed finding and accessing ARC-stored materials as part of an integrated search and retrieval process. ARC book loans mirror, for the most part, the proportion of subject resources stored in the ARC. Exceptions to this are the higher proportions of loans from history (largely ancient history) and philosophy/religion classifications, subject areas where Macquarie is research-intensive and where print resources still dominate. A comparison of loans to stored items for key circulating classes may be seen below.

Table 2. ARC storage and circulated percentages for key stored classes (Library of Congress).

	B (Philosophy, Psychology, Religion)	D (History)	H (Social sciences)	K (Law)	P (Language & Literature	Q (Science)
Books-: ARC storage %	6	10	17	6	26	11
Books: ARC loan %	12	16	13	6	22	9

While it is not possible to say how a particular client identifies a particular title to request, patterns evident in the ARC loan records suggest that identification of requested items occurs from a combination of 'known item' and subject searching. The table below shows circulated items by date of publication (rounded to five year intervals). With items published or acquired from 2006 located on the open shelves, the age range of requested monograph literature from the ARC suggests a subject search approach with items identified via the Library's catalogue or discovery tool. Multiple title requests for books on the same subject placed on the same day also suggest a subject searching approach generating ARC requests.

Figure 1. ARC circulated items (books) by publication date in five year intervals.
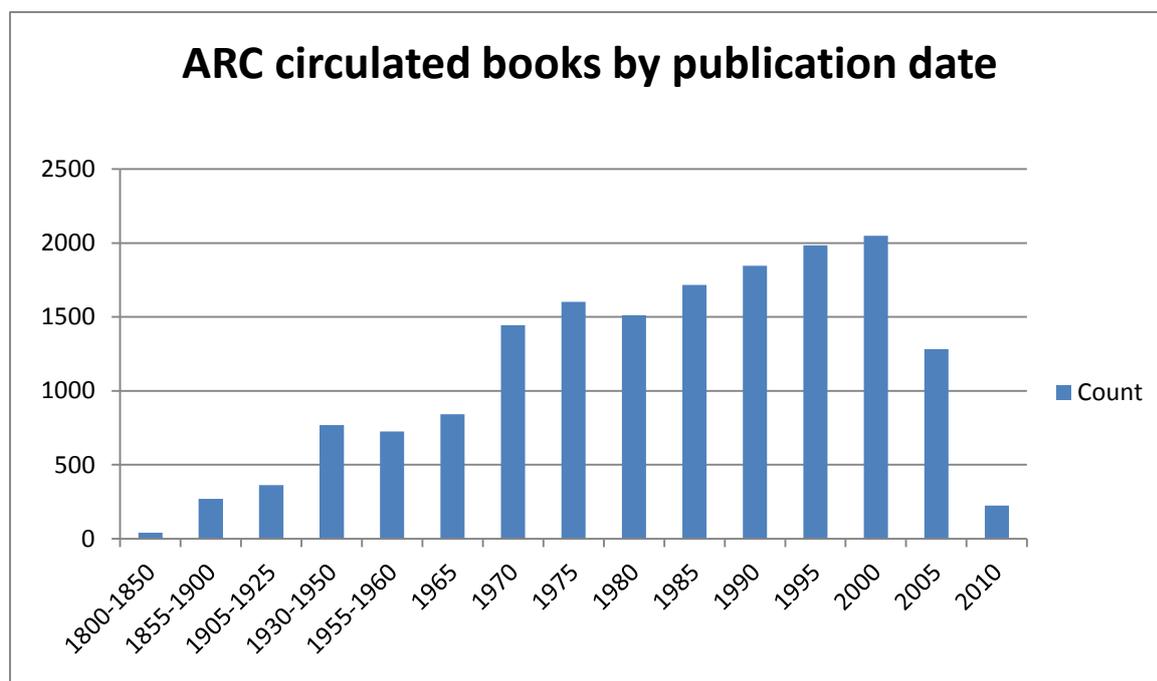
Contrary to some early staff speculation about the extent of ARC requests that would be generated by students seeking previous editions of textbooks or required readings, that interest has been minimal. Using historical high loan counts as a proxy for required texts from previous years, the data show that only 0.05% of ARC requests can be accounted for in this way.

Further evidence that an ARC location has not been an impediment to discovery and access can be seen in the 5,214 ARC items with a publication date prior to 2006 that have circulated *for the first time* since July 2011. This is an exciting finding and we hope that further analysis of these data will shed more light on why titles which languished on the open shelves for many years without being borrowed have been used for the first time while in the ARC.

Our collection profiling for the academic consultations and on-going liaison work has spread the message of the hybrid (print and online) nature of the Library collection as well as that of storage in the ARC to our academic community. At this stage, however, we can only speculate as to whether this has encouraged a reduced reliance on physical shelf browsing

to find relevant resources and channelled our clients more toward discovery tools where they can identify the full range of our resources. In April 2011, barely three months before moving to the new Library, a further input to the changing dynamic was the launch of our resource discovery tool, Primo. Apart from the cross searching of our local resources with online databases and journals, MultiSearch (our local name for Primo) was also the first time our clients could cross search our catalogue, e-reserve and the University repository; valuable new functionality that was heavily promoted. A targeted survey was carried out in the first months and showed a very high satisfaction rate (93%) with the predominantly undergraduate respondents. A one-year review in mid-2012 which looked at 2011-2012 feedback and usage trend data was also highly positive, with searches in MultiSearch overtaking the catalogue each month since January 2012 and substantially so during the student sessions.

Eresources, ARC and integrated discovery

The shift in our clients' use to e- from p- is clearly evident in our ARC serials loan data. While most of our print serials are located in the ARC (exceptions are the last two years of continuing print subscriptions which are on the open shelves) and easily retrievable via ARC request, clients are choosing to use the electronic versions.

Macquarie's e-preferred model for journals has been in effect since the late 1990s, but the increase in publisher ebook collection offerings (especially front files), the narrowing (or disappearing) gap between print and electronic publication dates, and trends in client preference have seen us shift to e- for books as well. Ebooks were also given a boost as part of our collection availability strategy during the period of the collection preparation and move to the new Library during 2010-2011, with a number of large publisher ebook packages added to the collection at that time.

In September 2011, the Library moved to an e-preferred model for monograph orders. With regular ebook packages and single ebook titles being added to the collection, ebooks now represent 32% of our monograph collection. By the end of 2012 our ebooks totalled 377,081 compared to 787,787 print volumes. Ebook usage increased 25% between 2011-2012 and in 2012 the ebook (section) usage was higher for the first time than print book usage; 344,016 ebook usage compared to 322,101 for print resources. While the ebook usage and print loans differ from a statistical standpoint, these data are clearly showing the rapid growth in usage of our ebooks, while our print usage (measured in loans and re-shelving) is declining.

In this context our goal has been to ensure that ebooks are also seen as part of an integrated collection and that our open print, ARC print, and ebooks are cross-discoverable and accessible, with format or location having minimal impact on the client's choice of the most relevant resource. One way in which we have sought to improve exposure of all our resources is via a 'virtual bookshelf' that displays all resources by call number regardless of location. Eresources are included where a call number is available (currently 45% for serial titles and 41% for monographs). The virtual bookshelf displays book covers for items (or a representation if a cover is not available) and clients can browse forward and backward along a virtual 'shelf.' Client feedback shows that this visualisation of resources, a virtual browsing experience, has been particularly effective in increasing awareness of ARC resources in search results, and is also serving to provide a new approach to discovery of

eresources. A discussion of Macquarie's virtual bookshelf appears in Burton & Kattau (2012).

Conclusion

In planning for locations of material in the new Library we had two imperatives for discovery and access: to enhance discovery of the most relevant print resources, especially for students, by locating on the open shelves highly used and recent acquisitions that support current curriculum and research; and to maximise the integration of the material located in the ARC for discovery by enhancing records and facilitating quick and efficient retrieval of items. Our virtual bookshelf tool was also developed to promote the idea of an integrated collection.

Based on ARC usage to date, clients have been successfully discovering ARC material and circulation patterns suggest that this is in response to subject searching, not just as a result of known item searches. Items located in the ARC have been borrowed for the first time since being added to the Library's collection and the pattern of circulated items follows the pattern of collection strengths built up over the past 45 years to support Macquarie's teaching and research interests. Across the board in 2012, 10% of all loans came from the ARC.

With the Library literature on ASRS storage in its infancy, we have throughout the process turned to the experiences with offsite storage for context and comparison. In his survey of Australasian University librarians Genoni found that "[a]lmost all respondents discussed the changing attitudes of their users at some point and universally indicated they have come to accept either that access can be provided by means of a digital surrogate or that delayed access to stored content may be necessary if the original item is required" (Genoni, 2012:41). In his earlier article Stoller noted that "as our users become accustomed to finding what they want in online catalogs instead of browsing the shelves, they care less whether the item they are seeking is in their own library or among the holdings of some other institution. As long as we can get the item into their hands in just a day or two, they are reasonably happy" (Stoller, 2005:5). Michalak goes further by describing retrieval services in client-centic terms: "Use of collections…is pushed outward…UNC successfully moved more than one million printed volumes from the main library to offsite storage with only a few complaints. People can order these titles online for next-day delivery, again moving traditional library functions into the user's realm and adding to the library's outward-facing profile" (Michalak, 2012:414).

Through the incorporation of an ASRS at Macquarie we have obtained the space gains but avoided delayed access, which has reduced the resistance of our clients to this collection model. While online discovery tools take on an increased importance, ARC retrieval is succeeding in the goal Payne described for ASRS facilities: "match[ing] the user's experience in a traditional open-stacks library environment by providing requested items in about the same time as patrons would normally spend retrieving volumes from traditional shelves" (Payne, 2007:14).

Our experience over the past two years with onsite storage utilising an ASRS tells us that: our collection location decisions were well-founded (serials storage was a given, but our

detailed academic consultations on monographs allowed us to fine-tune monograph locations); turnaround times are more than satisfactory (we have 'over-delivered'); and our discovery tools and record enhancements are facilitating exposure and discovery across the print and electronic collections. The ARC is part of a continuum (from open physically browsable shelves, ARC retrievable resources, electronic downloadable resources, and access to the research holdings of other institutions through document supply) aimed at meeting our clients' resource needs and facilitated by good discovery tools and efficient access. One of the joys of university library collections is their serendipitous nature, reflecting historic and continuing research and teaching strengths. With our collection storage and retrieval model we have been able to ensure that, while the less-frequently used parts of our print collections may be 'out of sight', they are still in view.

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