

# Evidence-Based Library Collection Management

*An overview of available tools and metrics*



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*Swets Selection Management*

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# Introduction

Over the past few years, many libraries across the world have seen their budgets cut, sometimes quite dramatically, and now face increasingly difficult decisions regarding purchases, renewals and cancellations of academic content. This can be a demanding process, because these decisions must be made with limited and imperfect information on the value each title provides to the library. However there is a powerful range of metrics that are particularly useful for assessing the value of e-journals and which enable librarians to approach Selection Management with real confidence. Selection Management encompasses everything from the validation of useful data and systematic analysis, to the actual selection and acquisition of content. It therefore enables librarians to make sound, evidence-based decisions. A major pressure on libraries is to balance the budgetary concerns of their institution with the demanding content requirements of researchers and students.

There is no exact science to managing the selection process, but where librarians have the necessary components, the task can be completed effectively and efficiently. This white paper examines the various metrics at the librarian's disposal, such as usage statistics and impact factors and how, when combined, they provide the evidence required to support the full Selection Management process.

Institutional budget cuts can have a number of implications for a university library. When departments are competing ferociously for their share of limited and even declining budgets, librarians must make difficult decisions about which content will be cut from their collections and where those changes will be applied. In addition, libraries are under increased scrutiny to demonstrate that all content decisions have a sound evidence-base that makes the best use of the available budget and demonstrates a clear return on investment for the institution. Therefore, it is increasingly important that librarians are able to determine and demonstrate the value that any journal or monograph title brings to their library<sup>1</sup>.

Although detailed usage statistics are now available to librarians on almost any title, collating, deciphering and understanding the context and value of these metrics can be complicated. Without the right tools, analyzing this information can be tedious and difficult. It may be fairly simple to find an individual measurement for an individual title, but librarians need to employ tools to assist them in assessing a variety of metrics across their entire collection. Librarians typically need:

- Accurate, up-to-date title and price information for e-journal subscriptions
- Automatic collection of usage statistics and other measures of value



Budgetary pressures and competition between departments for learning and research resources make collection management challenging. An evidence-based approach can satisfy both budget holders and faculty.

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1 International Federation of Library Associations and Institutions *Key Issues for e-Resource Collection Development: A Guide for Libraries* [http://www.ifla.org/files/acquisition-collection-development/publications/ifla\\_electronic\\_resource\\_guide\\_draft%20for%20comment.pdf](http://www.ifla.org/files/acquisition-collection-development/publications/ifla_electronic_resource_guide_draft%20for%20comment.pdf)

- Information on purchased packages and potential alternatives.

Gathering this vital information and undertaking analysis with reference to specific contractual obligations gives librarians a complete overview on the value of the journal collection. Each individual metric then becomes far more useful for collection management.

## Evidence-based approaches to collection management

### Common issues and ROI

One obvious measure that libraries can take to reduce costs is to cancel journals deemed least relevant to the patrons of the library. However, making such decisions is often not that simple. A complication of this process is the fact that many libraries have been facing budget reductions for a number of years in succession, making the process of cancelling titles progressively more difficult and problematic. The titles it was least controversial to do without have already been cancelled and titles that remain often have passionate advocates at departmental level. But libraries must still deal with these cuts and so need reliable evidence for their decisions. This evidence-based approach to Selection Management allows librarians to demonstrate the validity of their choices and illustrate that the needs of end users are still being met under conditions of reduced funds. As most libraries are not expecting significantly increased budgets at any point in the foreseeable future, this trend will continue.

Along with reduced budgets, libraries may also find themselves coping with reduced staff numbers, which creates additional pressure on establishing the most efficient workflow and processes from which to make the best possible decisions on collection management. The delivery of results against budget becomes more important in this situation, which naturally demands quantitative methods for informing decision-making with hard evidence.

When it comes to day-to-day spending, most institutions are concerned that end users, including students, faculty and researchers, should feel the impact of cuts to services as little as possible. To achieve this, the institution needs the greatest possible value for money. Return-on-investment (ROI) is a complex metric under these circumstances<sup>2</sup>, but there is a growing body of study on how best to achieve



Return-on-investment is an essential metric to consider when calculating relative value of the library and library holdings.

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2 What Academic Libraries Contribute to Productivity  
<http://www.libraryjournal.com/article/CA6676486.html>

it<sup>3</sup>. Put simply ROI is the quantifiable financial return on the investment made. Much of the value of the library, in contributing to learning outcomes and to the quality of research output, is arguably difficult to quantify in this manner. However a study at Cornell University found that: *“even a partial list of how CUL is used every day shows that we generate more value than how much money is expended on supporting our operations.”*<sup>4</sup> The study offers a useful model for other libraries to begin make their own ROI estimations.

The move to electronic delivery of library resources allows librarians to access comprehensive statistics about the usage and value of the library collection; statistics that contribute to making these ROI calculations.

## Learning Outcomes and Supporting Institutional Objectives

Each library has a similar mission, to support the study and research needs of its institution. Titles that serve a small department may have very few readers compared to journals used across many different courses. If libraries adopted an approach to selection management based purely on usage, such journals could easily find themselves on the cancellation list. However, smaller departments have as much right to demand the key resources that they need as the larger departments. For example, they may be doing unique work that contributes to the reputation and personality of the institution. Moreover each department has its own strengths and priorities, and librarians simply do not have the luxury of buying the most popular titles in any given field. The library collection has to reflect the more nuanced approach of different courses, staff research interests, doctorate titles and research projects.



It goes without saying that institutions will always find that some subjects are more popular than others, however the decision on which departments and courses to support isn't made by librarians. Their duty is to provide all students and researchers with access to relevant, high quality resources and this is a task best achieved by creating a balance of expenditure between the competing departments and library patrons. The library is at the heart of academic study and plays a vital role in helping students towards better learning outcomes. Reading is, of course, part of learning, but students also recognize that professors expect them to demonstrate a familiarity with a certain number of sources, use wider reading to improve their own academic writing style and access reliable, peer reviewed information in their field of study that can be cited correctly<sup>5</sup>.

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3 Council of Australian University Librarians *Return on Investment and Value of Libraries – Bibliography*  
<http://www.caul.edu.au/caul-programs/best-practice/cqaac-resources/value-of-libraries>

4 Cornell University Library Research and Assessment Unit Blog: *Library value calculations*:  
<http://research.library.cornell.edu/value>

5 *Answering questions about library impact on student learning*  
<http://www.inthelibrarywiththeleadpipe.org/2012/answering-questions-about-library-impact-on->



The research output of many institutions is assessed by government departments, with funding dependent on demonstrating meeting essential criteria. In the UK the Research Excellence Framework<sup>6</sup> requires each university to take a census of university researchers in post and provide a detailed submission on their recent publications and research output which is then assessed not only for “*originality, significance and rigor*”<sup>7</sup>, but also for impact, expressed as “*reach and significance*”. Research is also expected to contribute to “*the vitality and sustainability of the wider discipline or research base.*” Submission to the REF is a process which takes a dedicated team at any given university up to two years to complete and vital funds are reliant on successful submissions.

In some countries, a range of metrics are used to evaluate the level of government funding allocated to each institution.

The Excellence in Research for Australia (ERA) Initiative<sup>8</sup> similarly scores institutions based on their research output. In the US the Center for Measuring University Performance (MUP) produces an annual *Top American Research Universities Report*<sup>9</sup>. These ranking systems reflect the competitive nature of higher education. Institutions want to attract the best talent in any given field, command high fees for students joining them and attract students from around the world. To do this, institutions must demonstrate the quality of their work. Libraries are pivotal in resourcing the academics whose research output achieves both government and market-driven targets. Supporting these research outputs is one of the key functions of the institutional library, and therefore Selection Management has a direct role to play in supporting the wider institutional goals.

## Usage Statistics

Historically, a large proportion of the budget of many institutional libraries was reserved for purchasing serials. When these were all provided in print they were often used within the library building, so there were no borrowing records to see what use was being made of them. In some cases simple sign-and-date sheets were used to track the usage of a print journal but for many librarians the inability of library patrons to put away their materials provided the only reliable insight into usage. If it was left on a desk it had been used, and if it was on a shelf then maybe it hadn't.



This has changed with the rapid rise of digital reading. Content has become digital and different methods can now measure the value and importance for end users. Just as websites track the number of visitors and their behavior, online resources give librarians unprecedented information about the use of digital journals and

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[student-learning/](#)

6 Research Excellence Framework <http://www.ref.ac.uk/>

7 REF 01.2012 January 2012 *Panel criteria and working methods*  
[http://www.ref.ac.uk/media/ref/content/pub/panelcriteriaandworkingmethods/01\\_12.pdf](http://www.ref.ac.uk/media/ref/content/pub/panelcriteriaandworkingmethods/01_12.pdf)

8 The Australian Research Council <http://www.arc.gov.au/era/default.htm>

9 The Center for Measuring University Performance <http://mup.asu.edu>

books. This information is vital for making selection decisions.

Additionally, the measurement of usage is more subtle than simply recording which resources are the most read. When making selection decisions librarians are always balancing the competing priorities of different patrons. Journals of relevance to a large department, where a number of different courses overlap, have to compete with smaller subject areas that only need one or two key titles. But the digital age has provided yet another benefit – multiple opportunities for recording how resources are being used.

## The Standardization of Usage Statistics

From the outset, most publishers provided statistics about usage of their electronic resources. However, the radically different technologies and measurement models used across publishers made it hard for librarians to use these statistics in a meaningful way, for example, in providing comparisons of usage of different publishing platforms in order to evaluate their respective performances. It was also difficult for publishers to know which elements of their statistics would be the most useful for librarians.



Two initiatives, the SUSHI protocol and Project COUNTER, sought to address this issue by creating standardized usage statistics and reports to make comparing usage of different titles a far simpler task.

The Standardized Usage Statistics Harvesting Initiative (SUSHI)<sup>10</sup> Protocol defines a standard so that usage data can be collected. And by automating the collection of data, SUSHI encourages publishers to adopt the defined standards, making statistics easier to compare. This standardization between publishers is taken further by Project COUNTER which defines and maintains the reports that librarians actually get to see.

Project COUNTER, Counting Online Usage of Networked Electronic Resources, launched in 2002 and has become the standard for many librarians when looking at usage statistics. The project sets *“standards that facilitate the recording and reporting of online usage statistics in a consistent, credible and compatible way”*<sup>11</sup>. Due to the wide take up of the code of practice, COUNTER compliant statistics allow librarians to make comparisons between publishers. Meanwhile publishers know that they are providing statistics that are useful for librarians in a format that they can understand.

The industry standard for a ‘use’ of a journal article is a full text PDF request or a full text HTML request. E-resources can be delivered to end users in a number of different formats and COUNTER reports deal with this variation by defining both

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10 Standardized Usage Statistics Harvesting Initiative (SUSHI) <http://www.niso.org/workrooms/sushi/>

11 Project Counter <http://www.projectcounter.org/about.html>

a full text PDF request and a full text HTML request as a use, while also including other formats, such as PostScript, in the total number of views. In this way the vast majority of usage through HTML and PDF can be examined separately, but other instances of use don't drop out of the total figures.

COUNTER statistics have undoubtedly been a success in helping librarians to evaluate online resources. An agreed code of practice does not, of course, render all publishers, or all published material, the same. Nor does it prevent librarians from having to log in and out of different publisher platforms and undertake manual aggregation of data to make it meaningful to their own holdings. However there are now tools that do just that, allowing librarians to make the most of the potential of standardized reports for comparing titles.

Usage statistics are undoubtedly an extremely useful element when making selection decisions. But while publishers issue statistics about the usage of online resources, librarians need to make decisions about entire collections. Every subject will have holdings of journals, databases and books, the value of which must be weighed against one another. Usage statistics become more powerful when examined in the context of another important measure of value – cost.

## Cost As a Measure of Value

The total cost of a title, either a book or a journal, can be an elusive figure to pin down. For a book there is the question of how quickly a title will go out of date – is this a book that will remain relevant for a year or a decade? For a journal, even aside from the complexities raised by a 'big deal', there's the matter of the number of issues per year and how long the contract runs for. In some disciplines texts become out of date very quickly, in others standard works are relied upon year after year. Costs can be annualized, but the many different sales models for different publishers and titles all add confusion to any process of determining cost. It is not always easy for librarians to gain visibility of the factors that create a need for resources to change, all of which create complexity for the librarian even when using annualized costs as a guide.

Library and departmental budgets change; publisher prices are not static. Application numbers to specific courses rise and fall. Individual academics move between institutions taking specialized research interests and courses with them. Failing to take this dynamism into account could potentially lead to a collection with unread titles, even if the initial assessment of need and value was done with experience, insight and great professional judgment.

It's also important to note that cost is not the same as value. Value is found in how useful library patrons find the work, how many times they read it and cite it, how central it is to courses running throughout the institution. Sitting down to compare



cost without reference to usage runs the risk of cancelling expensive titles that are essential to many library users.

## Cost-Per-Use

At its simplest the measure of cost-per-use is the total cost of a journal divided over the number of total number of full text requests. Since it takes into account the relevancy of the title to the library end users, as evidenced by the number of times they've chosen to access it, it provides a measure of value to the end user. Because of this immediate indication of value cost-per-use is particularly effective in making comparisons between publications, even across different subject areas. It can also inform decisions on how to purchase content. Content with low usage and a high cost may be better acquired through a pay-per-view model, while content with high usage levels may offer the greatest value when purchased through a subscription, even if the cost of the title seems at first glance to be quite high.

It's also worth noting that when considering cost-per-use some libraries may keep providing a title where the cost-per-use is high, if the usage itself is of a volume that would place a burden on the Interlibrary Loans service if the title were cancelled<sup>12</sup>.

Turning to a pay-per-view purchasing model gives an institution the chance to open up access across titles that have previously not been purchased because they have been deemed too expensive, or not relevant enough for end users. When the library at Lafayette College<sup>13</sup> turned to a pay-per-view purchasing model they found that two journals previously rejected on the basis of their high cost climbed straight into the top ten journals. Clearly end users found these titles useful enough to merit the higher cost of a subscription.

## Impact Factors

Quantitative analysis of a library collection clearly has limitations, but when undertaking a more qualitative approach librarians also need information on which to base their professional judgment. For journals, impact factors are the most widely used qualitative measure.

Impact factors are widely used for science journals along with other titles in social sciences. The guiding principle behind the different measurements of impact is that important articles will receive more citations. The presumption is made that each citation is an endorsement. By measuring the number of citations in a meaningful

Cost on its own does not give a good enough view of the value a journal has. Cost per use is a much better indicator.



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12 Library Journal *Looking at Usage Data and Alternatives, Wellesley College Prepares for Journal Cancellations* <http://www.libraryjournal.com/article/CA6723367.html>

13 Making the right choices Pay-per-view use data and selection decisions, [Michael Hanson](#) and [Terese Heidenwolf](#), College and Research Libraries News December 2010 71:586-588 <http://crln.acrl.org/content/71/11/586.full?sid=7d82b1e9-8aa9-4e28-ab81-0bdbbb4b8d52>



way, the impact of a journal can be measured, but for scientific disciplines in particular, the value of the impact factor cannot always be compared between subjects or disciplines. The score of the journal with the highest impact factor in any given field of study can demonstrate enormous variation<sup>14</sup>. This is because citations are used in different ways in different disciplines.

While impact factor seems to be a reasonable way to rank journals by popularity, these scores are not without their complications. The most central complication being that there are different ways to measure the number of citations. The term “Impact Factor” is widely used to describe all the systems of ranking journals in this way. In fact there are competing systems, providing different information about different data sets.

The most widely known system of impact factors is the one used by Thomson Reuters. Here, the term “impact factor” refers to the average number of recent citations derived from data published in the Thomson Reuters Journal Citation Reports. Thomson Reuters states that: *‘a journal’s impact factor is calculated by dividing the number of current year citations to the source items published in that journal during the previous two years’*<sup>15</sup>

Using data drawn from the Elsevier Scopus<sup>16</sup> database, SCImago Journal Rank (SJR) is the other major measure of impact factor. Its calculation includes the importance of where the citation itself is published, the citing work. It places more importance on the notion of endorsement, thus the citations from a more important journal are given extra weight. The algorithm has been developed from the Google PageRank<sup>17</sup> used to assess the importance of websites via weighted inter-linking.

The SCImago Journal Rank is like the traditional impact factor, but uses a more sophisticated weighted algorithm similar to Google’s PageRank®

There is a large overlap in the journals measured by two systems, but their datasets do differ. Thomson Reuters Impact Factors are split into two subsets, sciences and social sciences, while the SCImago Journal Rank has a single collection. The Thomson Reuters Impact Factors have a smaller geographical reach, and are more heavily orientated towards English publications, though there have been moves to extend their global coverage. The SCImago Journal Rank has greater global coverage and is free to access rather than sitting behind a pay wall.<sup>18</sup>

There is occasionally concern over the use of impact factors<sup>19</sup>, however they are also

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14 Science Gateway High Impact Journals <http://www.sciencegateway.org/rank/index.html>

15 Introducing the Impact Factor

[http://thomsonreuters.com/products\\_services/science/academic/impact\\_factor/](http://thomsonreuters.com/products_services/science/academic/impact_factor/)

16 <http://www.journalmetrics.com/sjr.php>

17 SCImago Journal & Country Rank <http://www.scimagojr.com>

18 Impact factor, Scimago Indexes and the Brazilian journal rating system: where do we go from here? <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2862664/>

19 Spectra Special Issue The Future of Academic Publishing *Journal Impact Factors: Uses and Misuses* [http://www.natcom.org/uploadedFiles/Publications/Spectra/Spectra\\_March2012\\_Vol48Iss1.pdf](http://www.natcom.org/uploadedFiles/Publications/Spectra/Spectra_March2012_Vol48Iss1.pdf)

widely seen as a good indicator of the average quality of a journal and rankings remain steady over time. Impact factors can be used in conjunction with other indicators of value to create a more complete picture of the value of any given title. If they have their limitations they also have their proper place, in assisting professional librarians, who understand the nuances of publishing, the diverse landscape of scholarly communication, the mission of their own institution and the needs of their patrons.

## Alternative Metrics

Impact factors and journal rankings judge the value of a journal in its entirety, but they do not make a judgment on the value of individual articles. By way of example, it's possible that for some journals, a single article might be the most cited piece of work published in that journal in a given timeframe. But this would not affect its impact factor rating, despite the potential importance of the single work. A new, alternative way of understanding and measuring the importance and value of individual articles is known as altmetrics. Altmetrics is the study of new metrics for analyzing and informing scholarship based on the social web.

As scholars increasingly move their work to the web, citation reference managers such as CiteULike, Zotero and Mendeley now have access to millions of articles<sup>20</sup>. As such, an article that might have taken months, if not years, to achieve its first citation can now be shown to be cited, reviewed, commented upon all in a matter of weeks, if not days. And as these comments are being played out in the public arena across blogs, Twitter and other sites, anyone with a vested interest can express their viewpoint.

Because end users like these tools and are using them, reference managers themselves are gathering a large amount of data on what is being read and who within an institution, is reading it. This data comes directly from end users, rather than through publishers.

Indeed, institutions are already beginning to track usage through [Mendeley's Institutional Edition](#) which shows librarians the articles their end users are reading, and who is reading the articles they publish. This provides a far quicker insight into the impact of an article than traditional impact factors, which take years to provide data<sup>21</sup>. Ultimately altmetrics and the data from tools such as the Mendeley Institutional Edition may prove complementary to impact factors, and librarians will have another set of metrics on which to base Selection Management decisions.



The rise in popularity of alternative, but meaningful, metrics has led to innovative tools and services being developed to generate a wider picture for libraries.

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20 Altmetrics Manifesto – <http://altmetrics.org/manifesto>

21 Research Information Mendeley promises to accelerate analytics  
[http://www.researchinformation.info/news/news\\_story.php?news\\_id=990](http://www.researchinformation.info/news/news_story.php?news_id=990)

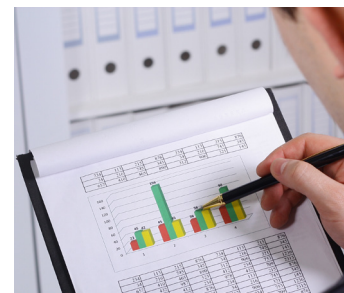
While real time information is important to librarians, they cannot always react immediately. Many subscriptions dictate an annual buying cycle. Metrics that allow librarians to identify reading trends give a good insight the needs of faculty, particularly when the same courses are not on offer year after year.

There is now a growing body of research into the validity of these alternative metrics and their relationship to established measures. A high level of Twitter activity can be an indicator that a paper will also receive many citations<sup>22</sup> as does high Mendeley usage<sup>23</sup>. Altmetrics facilitate the understanding of how a particular paper has penetrated the social web, including specialist tools like Mendeley.

Not only does this help to accelerate the pace of scientific discovery, but it also helps institutions validate, alongside other metrics, which journals are key for their collection and which might be cancelled, if necessary.

## Collection Management and Acquisitions

The variety of purchase models and licenses available to librarians is an important factor in the access management of electronic resources, which has knock-on effects on the selection process. So far this guide has examined internal metrics available to the librarian, but when it comes to the actual acquisition of resources for the library, a number of other factors come into play, and given the correct information librarians can reduce costs. Libraries can purchase a title from more than one source – direct from the publisher or through any number of third parties and aggregators. There are different purchase models and licenses available through these sources and there are also a number of additional factors that can be considered when undertaking Selection Management.



### Licenses and Conditions

Evaluating the exact licenses and conditions available from a number of vendors allows librarians to make the most cost-beneficial choice available to them. There can be added complication here from the provision of bundles or packages of different information. It's key to be able to gather the different licensing information into one place, in order to compare deals against one another and assess them against the needs of end users.

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22 Journal of Medical Internet Research *Can Tweets Predict Citations? Metrics of Social Impact Based on Twitter and Correlation with Traditional Metrics of Scientific Impact* <http://www.jmir.org/2011/4/e123/>

23 F1000, Mendeley and Traditional Bibliometric Indicators <http://www.mendeley.com/c/5131466534/g/586171/li-2012-f1000--mendeley-and-traditional-bibliometric-indicators/>

## Big Deal Analysis

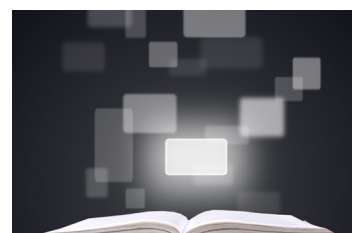
The big deal fundamentally alters the library budget from one based on a large number of small transactions to a few extremely large ones. However, librarians can find themselves in a position where they have to find the budget to continue with the subscription because so many journal titles across different subjects are tied to it. In some cases publishers have responded to this lack of flexibility by introducing a more nuanced approach to the big deal which allows libraries some flexibility within their contract, perhaps in managing their need for print vs. electronic subscriptions and taking or rejecting subsets of the deal. However with flexibility comes complexity in the selection process; complexity that librarians must manage. For many libraries, the 'big deals' have been a good deal for the institutions. Usage statistics indicate that older titles often receive as much usage as more current titles. Because all titles are interconnected and interlinked, discovery of relevant information is simplified and many older publications find new life in a digital collection.

## Duplication

With books and journals purchased in an electronic format there's often no need for individual colleges and departmental libraries to hold different licenses to enable students to access the content. However titles can be bundled into packages making visibility on duplicate subscriptions difficult to achieve. Establishing which titles are duplicates and implementing practical de-duplication focused on achieving the best value is another important facet of selection management and acquisitions.

## Subscriptions vs. Article Purchasing

To achieve the most effective deployment of library budgets it's important for librarians to be able to analyze whether all of a journal's content is needed or whether a few articles could be purchased individually. Closely evaluating the different purchase models can help librarians cancel content that patrons aren't reading and release budget to spend on new titles.



## P to E Purchasing Opportunities

The relative importance of providing content in print or electronic format is different for every library, but most now manage a sophisticated purchasing process that involves both formats. A recent survey showed static growth in the proportion of periodicals being taken by libraries as electronic subscriptions<sup>24</sup>. This probably

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24 Publishers Communication Group *Library Budget Predictions for 2012*  
<http://www.pcgplus.com/research.htm>

reflects that the tipping point has already been reached. Indeed, in a recent keynote speech given at ALPSP's 2012 Annual Conference, Mark Ware, Outsell Inc., commented that this tipping point occurred in 2008. In his speech, he said that it is now circa 60/40 split for eJournal purchases compared to print journal purchases<sup>25</sup>. Certainly take-up and usage of eJournals are increasing following greater provision. By 2008 96% of STM and 87% of arts, humanities and social sciences journals were accessible electronically<sup>26</sup>. The usage of electronic journals continues to grow by up to 25% per annum<sup>27</sup>.

Meanwhile the proportion of books taken in electronic formats almost doubled between 2010 and 2011. Major reference works are also showing a steady change from print to electronic delivery. For example, in 2011, the gap between print and electronic purchases was 20% whereas this year it is just 10%<sup>28</sup>. When deciding between a print or electronic subscription the librarian must, of course, take into account end user preferences on format. The different licenses from different publishers also have cost implications. Additionally, electronic subscriptions or eBooks yield far more information about user preferences on which to base renewal decisions, so moving to electronic delivery helps the library to become more efficient in the long term.

## Conclusion

Academic libraries are pivotal in their contributions both to learning outcomes and to the wider research goals of their institution. Each institution is unique and each library collection is the result of creating a delicate balance between competing departments and end user needs. And as the needs of the end users change over time, so does usage of library resources. Library collections must therefore be dynamic, constantly adapting to deliver the resources their end users need.

When available resources are under pressure, there is greater scrutiny of budget spend, to ensure that expenditure supports strategic goals and delivers a front line benefit that is relevant and visible to end users. With this additional scrutiny comes the need to provide evidence that demonstrates the reasons for spending decisions to institutional management committees who control spend across university departments and services, such as the library. Maximizing the effectiveness of

Greater scrutiny of budgets and spend demands more evidence-based decisions on library content acquisitions, so the selection management process is paramount.

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25 Noted from keynote speech delivered by Mark Ware, Outsell, at ALPSP's 2012 Annual Conference, [www.alpssp.org](http://www.alpssp.org)

26 *The stm report An overview of scientific and scholarly journals publishing* <http://www.iata.csic.es/~bibrem/NECOBELAC/STM-report.pdf>

27 Informa 2010 full year results <http://www.informa.com/Documents/Investor%20Relations/Prelim%202010%20Press%20Release%2010211%20-%20FINAL.pdf>

28 Publishers Communication Group *Library Budget Predictions for 2012* <http://www.pcgplus.com/research.htm>



library spend is an essential response to stagnating budgets.

There are many different ways to assess the value of a library collection. Usage figures allow librarians to see which content is actually read by end users. With greater standardization, these statistics also allow librarians to compare titles from different publishers. Impact factors add further, more qualitative information about the reach and importance of publications, which is now supported by novel quantitative indicators such as altmetrics. Cost and cost-per-use data provide a framework within which librarians can make Selection Management decisions that balance the needs of different end users against the available budget.

If examined alone each metric cannot provide librarians with enough data to properly inform their decision making, but brought together they provide great insight into the value of different titles within the library collection. When this complete picture is achieved from the combination of these metrics, an ROI calculation becomes more feasible and valuable.

The combination of solid metrics and analysis can provide librarians with the tools they need to make better-informed content selections.

Meanwhile, the acquisitions process has its own complications, a result of the many different licenses and conditions set by both publishers and aggregators. Value isn't only found in determining what a library should purchase, but also in establishing where the best deal can be found.

This whitepaper has covered some of the main tools and metrics available to librarians to investigate the value and the ROI of the library collection. When used in combination, these tools help to present a comprehensive overview of usage vs. cost within the context of the license and conditions to bring greater efficiency and hard facts to the Selection Management process.

Swets' contribution to this process has been to introduce evidence-based management services that bring together these different strands of information into a coherent picture. In doing so, it is hoped that these services will go some way to alleviating the stress and complexity for librarians when it comes to assessing the value of their collections both in serving their library patrons and working to achieve the learning and research goals of the institution as a whole.

## Selection Management provided by Swets

As the sections above highlight, evidence-based collection management is reliant on gathering together many different of information sources. In essence librarians need better insights into:

- The importance and value of the content they acquire for their users

Swets has worked with librarians to develop a range of tools that meet the growing need to justify library spend during the selection management process.

- Changing information needs and popularity of content
- *Price per use and relative importance of titles*

These insights will help librarians to make informed content collection decisions in order to best utilize a limited budget.

Swets is dedicated to providing customers with more quantitative and qualitative information to increase the efficiency of the entire Selection Management process. The Selection Management Services covers:

- **Validation**

Establishes the value of content purchased by the library in the last year, providing a base on which to build future decision making.

- **Analysis**

After validation, analysis recommends titles for renewal and cancellation and identifies titles that could be purchased at lower cost.

- **Selection & Budget Control**

Select content for the coming year and allocate available budget among libraries, faculties and patron driven acquisitions.

- **Acquisition**

Purchase new content for the library based on sound evidence from validation and analysis.

## SwetsWise Selection Support

SwetsWise Selection Support provides an overview of library holdings, value metrics, subscription details and price information in a clear web-based evaluation tool. The overview includes:

- Sophisticated COUNTER compliant reporting to analyze a library's electronic resources by package or individual title
- Subscription details and price information
- Usage statistics collected using ScholarlyStats<sup>29</sup>
- Accurate price-per-use information for every e-journal
- Intelligent impact factor analysis tools, powered by Scimago (based on Elsevier Scopus data), to provide insight into the quality of a title.

The combination of all these types of information in a clear overview creates a comprehensive evaluation and analysis tool for making collection management

Swets Selection Support gives librarians a single place to analyse their collections effectively to make the right choices.

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<sup>29</sup> <http://www.swets.com/scholarlystats>

decisions. Librarians can balance cost, usage and relevance data against each other and use that information to make effective acquisition and renewal choices having compared journals, packages and databases from different publishers.

Swets recognizes that many libraries operate within a consortium and the tool allows librarians to share usage information with their consortium, create consortium-wide usage reports and analyze the usage behavior of the consortium collection by supplier, individual institution or as a whole.

## eDeal Renewal

The Swets eDeal<sup>30</sup> renewal service is an intuitive interface that allows librarians to see big deal license information. The service supports collection management within the reality of the library's collection. Features include:

- Key details about individual titles
- Information about mandatory titles and contracts
- Easy renewals processing
- Option comparisons for each line item
- Complete view of deadlines and status for different titles.

The overview also carries information on mandatory changes in the big deal, financial conditions and the spending projected into the next year.

## Mendeley Institutional Edition

The Mendeley social network is the world's largest crowd-sourced information library, with over 68 million unique documents<sup>31</sup>. The sheer size of this user-led working environment offers some unique opportunities for librarians. Mendeley Institutional Edition<sup>32</sup>, powered by Swets, provides a home on the network for the library and the institution. Using this solution, librarians are able to make the most of the advanced feature set:

- Monitor usage and popular research topics
- Track publications authored by members of the institution
- View the reach of institutional publications
- Link directly to institutional e-resources
- Build a unique institutional citation style

The power of the Mendeley database has been harnessed in the Mendeley Institutional Edition tool for libraries.

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30 <http://www.swets.com/eDeal-Renewals>

31 Filtering the research record and farming big data – SwetsBlog;  
<http://www.swets.com/blog/filtering-the-research-record-and-farming-big-data>

32 <http://www.swets.com/mendeley>

- Validate journal usage data against acquisition lists.

The solution gives a unique, in-depth insight into which publications library patrons are reading, sharing, citing and publishing. With Mendeley Institutional Edition, librarians are better able to monitor, support and facilitate research across the institution ensuring that the collection is of true value to members of the institution.

## Swets

Swets is the global market leader in managing professional information. It develops and delivers services that enable the use of knowledge to its full extent. From more than twenty offices around the world it actively serves clients and publishers in over 160 countries. The company's active role in today's complex information marketplace has been regularly awarded by E-Content Magazine in their annual "100 Companies that Matter Most in the Digital Content Industry." It is the only information agent to be ISO 9001:2008 certified on a global basis, a standard which affirms the company's stringent operation and client service procedures. For more information on Swets, visit [www.swets.com](http://www.swets.com), watch our [videos](#) or follow us on [Google+](#), [LinkedIn](#) and [Twitter](#).

**SWETS**