Case study

Using JUSP data to evaluate the effectiveness of discovery services

JUSP collects and collates COUNTER compliant e-resource usage data from a range of academic publishers and e-resource providers on behalf of libraries. From JUSP, libraries can run a variety of statistical reports for their own usage data.

This case study examines the way that two universities have used a combination of JUSP reports to discover whether their discovery service has had any effect on the use of e-journals in their collections. Discovery services provide search functionality over the entirety of a library's collections, allowing simultaneous search of web-based resources.

The extra cost of, and effort in, implementing a discovery service should be balanced by increased accessibility and use of e-resources purchased or subscribed to by libraries. Checking whether the discovery service is enabling discovery is important so that library teams can either correct issues with the service or decide whether to continue the service. Each university had different reasons for examining their discovery services and have been JUSP users since its launch in 2010.

Using JUSP to assess the effectiveness of the discovery service at City, University of London

Using JUSP "…we were able to provide an answer as for the implementation of Summon - that it was a success in terms of journal usage and it helped to increase it."

City, University of London has 18,997 students spread over three major city campuses, including City Law School. Its main subject focus is on technology, business and health.

The electronic access team of City, University of London has the role of monitoring and providing "safe access" for students to electronic resources. This task includes monitoring usage statistics through JUSP. As the university is spread out over London, the students are served by three libraries. The discovery service that City, University of London uses is Summon, provided by ProQuest.

City, University of London wanted to assess how

useful and effective Summon is and whether alternative services could offer better value. They set up a project to understand if there had been any impact on journal usage due to the discovery service. The project team wanted to answer the following questions:

♦ How many people were engaging with Summon?
♦ Did Summon increase journal usage?
♦ Were users accessing more, and more relevant, articles?

The project team used JUSP's JR1 reports to look at data from 2010 to 2016, taking three years either side of the date of implementation of their discovery

service which was in August 2013. JUSP was chosen because of its ease and reliability, as the team's usage statistics specialist stated: "it certainly saved me a lot of time and energy in gathering statistics reports". The data in JUSP is trusted by the usage statistics specialist because of the work that the JUSP team does in the background. He is aware that whenever a member of the JUSP community notifies JUSP of data inconsistency or when publishers have revised their statistics, the usage data on JUSP is retrospectively updated. He commented "things like that inspire our confidence that someone is keeping an eye out for something like that". JUSP is able to do this because of the team's background publisher liaison work.

The team selected eight of their most used publishers from JUSP as a sample to investigate for the project. The publishers' data were exported from JUSP as a CSV file into Excel. From Excel, the team made line charts showing usage over the six years. There was one chart for the totals of all eight publishers and eight individual line charts, one for each publisher. The line graph of total usage over the eight publishers visualised monthly variations in journal use. The individual charts allowed the team to identify any difference in usage between each publisher. The team used the trend line function of Excel for the years before Summon was installed and then for all of the six-year period.

As can be seen in Figure 1 the trend before the implementation of Summon was showing a slight increase in journal usage. However, the solid black trend line shows that from the point that Summon was introduced, the increase in journal usage became greater. The increase was slight for some publishers, but greater for others. The exercise revealed a yearly pattern of usage with peaks in November and March.

The project attempted to use Google Analytics to assess library website traffic but found that there was an insufficient amount of data to make comparisons between traffic before and after the introduction of Summon. They also took anecdotal evidence about journal usage from interviews with subject librarians in order to understand the fuller picture. The project provided a snapshot of the usage situation using historical data. However, the exercise could be refreshed in order to assess any effect of the discovery system over a longer period. For instance, whether the usage is still rising or has levelled off after the initial gain.

At the close of the project, City, University of London was able to answer the questions that were posed at the outset. It had evidence to show that people were interacting with Summon and that journal usage was increasing to a greater extent than it would have without a discovery service. It "confirmed that our students or library users are getting more full text articles".

The JUSP usage statistics provided evidence to demonstrate that Summon had indeed increased the use of journals. Other findings from the project concluded that the increased access to journals led to their students reading more journals and "putting more into their assignments or research output". The project was considered worthwhile because it showed that Summon gives an overall benefit to City, University of London in terms of research and learning. As the usage statistics specialist said, it "…gets more out of our subscriptions and adds more value to students and user experience". In consequence it was decided that Summon was effective and there was no need to replace it with any other discovery service.
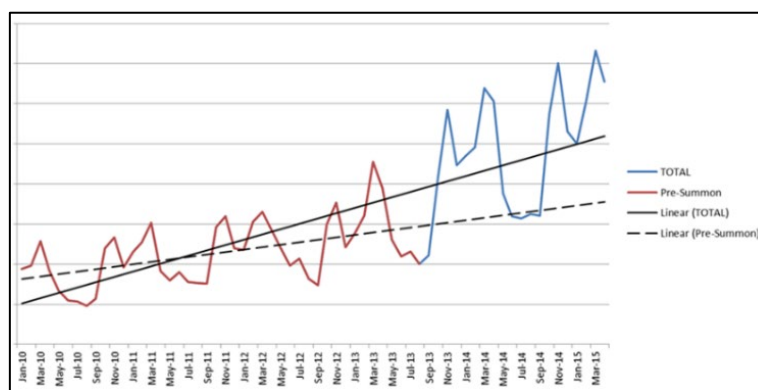

Figure 1: Totals of City, University of London usage figures from JUSP JR1 reports for 8 largest

Aston University's use of JUSP to monitor changes in usage patterns

"JUSP allows me to spend more time looking at WHY our usage is doing certain things, rather than actually collecting the data."

Aston University currently has around 13,000 students. Subject priorities focus on technical, business and allied health subjects.

Aston University is a comparatively small institution with a small library team. The e-resources specialist is the only user of JUSP who runs reports on behalf of her colleagues from the library team. Aston University uses EBSCO Discovery Service (EDS), an EBSCO product.

Aston University had noticed a change in journal usage patterns after they had installed EDS and wanted to find out whether this was linked to the implementation of the discovery service. For example, had the way that library users discover, and access e-journals changed, or did the metadata of some publishers in EDS contribute to the change?

The e-resources specialist decided to take the most used publishers by Aston University as a sample. She selected 16 publishers using JUSP's summary report called "Summary of publisher usage by date range". As only selected publisher usage for intermediaries such as EBSCO are shown in JUSP, full statistics for these were gathered separately. She used data from three academic years either side of the implementation date of their discovery service. In this case the date range was from September 2009 – August 2015 as EDS was introduced in the academic year 2012-2013.

The e-resources specialist used a combination of JUSP reports to compare any differences in usage between publishers and platforms. These were JR1, "Trends over Time" and "Usage Profiling". The JUSP team responded to a request by the E-resource specialist by forming a new usage profiling group: a "1960's" group. This ensured that Aston University was compared against the average of other relevant, similar institutions. She used JUSP usage statistics because JUSP could give her a JR1 report for the publishers that she had selected and a usage profiling report. She stated that she "would not have been able to get that data from anywhere else, especially with JUSP creating that group separately".

She also believes that using JUSP gave her time to do the analysis - "Rather than spending the time actually collecting the data JUSP allows me time to analyse it".

In order to have an overall picture of Aston University's e-journal usage the e-resources specialist also looked at statistics from EDS and abstracting services, such as Scopus. She looked at the university link resolver to find out how many times people linked out to the publishers and then entered all the data gathered into spreadsheets. The usage statistics from the sample range of publishers were added together and a line chart created for the totals over the timescale chosen. She then made line charts of each publisher separately to identify any difference in usage. In this case the data analysis was not straightforward. The e-resources specialist noticed certain spikes in the data. On investigation she discovered that the dates coincided with identified illegal activity, therefore she normalised the data, using figures based on the usual usage pattern.

The e-resource specialist discovered that prior to the implementation of the discovery service, general journal usage was gradually increasing for the selected sample of 18 publishers. However, as can be seen in Figure 2, journal usage fell for 11 of those publishers after the Discovery Service started in the academic year 2012-2013. The following year, usage rose for 15 publishers but then dropped again for 10 in the next year.

The e-resource specialist found that Scopus use in Aston University was following the same pattern, which indicates that the usage statistics were not flawed. In order to understand this fluctuation, she undertook a small literature review which confirmed that usage does rise and fall unexpectedly with no obvious cause. She stated that "I think we are all in the same boat" the difficulty is "trying to work out why things are happening and it might be a combination of things". It is for that reason that she intends to monitor the situation and carry out further investigation in the future.
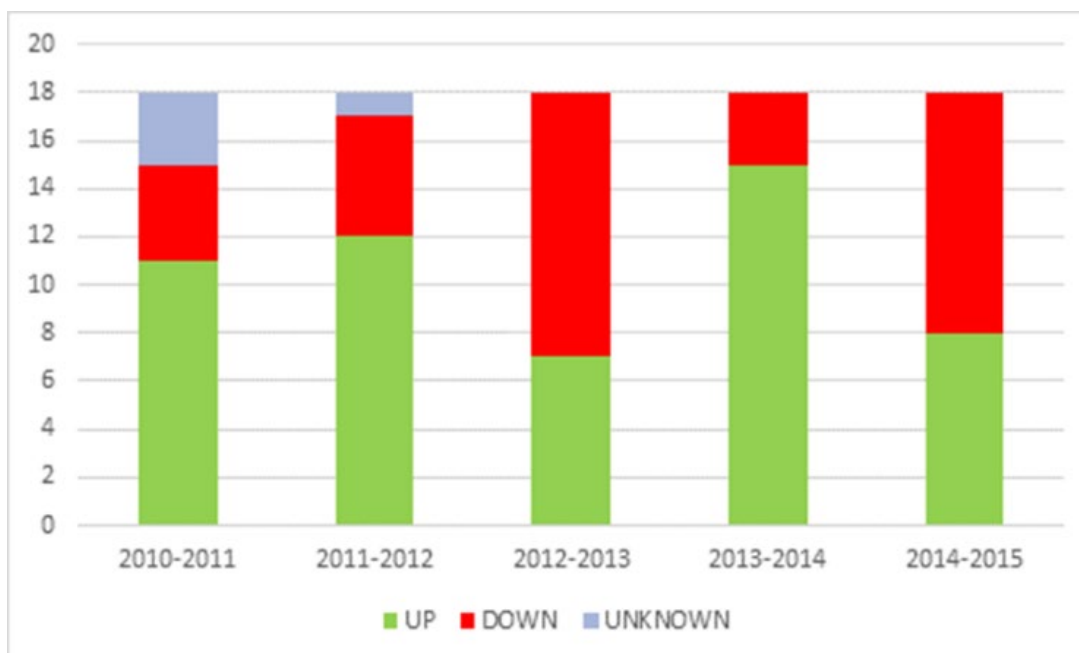
Figure 2: Number of publishers showing a rise or fall of journal usage over a five year period at Aston University

Summary

JUSP usage statistics reports allow library teams to check that their discovery service functions well and to assess whether users are discovering the e-resources that they need. This case study has looked at two universities who between them have used a range of JUSP reports to examine their discovery systems.

♦ A one-off project assessing the discovery system for evidence of its effectiveness and value for money. The project team's purpose was to make a decision based on that evidence, whether to change or keep their discovery system. It was decided to keep the discovery service as it is functioning effectively.

♦ An individual e-resource specialist monitoring patterns of usage after the implementation of a discovery service. Fluctuations in usage were detected and monitoring continues.

JUSP was used by the e-resource staff because of its unique features and functions. It is easy to use and simple to export into Excel for data manipulation and visualisation. It provides reports rapidly, saving considerable time. JUSP's summary reports are unique and are the only places that certain information can be found. Additionally, as JUSP is a community focused service it will respond to the requirements of its members. Without JUSP the examples in this case study may not have been achieved in a manageable time scale.

What you can do now

♦ View and export JUSP Release 4 JR1 reports to discover journal usage over a series of years

♦ Use JUSP summary report "Trends over time" and data visualisations to identify patterns of usage over multiple years

♦ Check the JUSP report "Summary of Publisher usage date range" to find your most used journal publishers

♦ Look at the "Usage profiling" report to compare your own usage from a particular publisher by calendar or academic year with an average for all libraries for which we hold data, and that are in the same Jisc band or region, and in the groups (pre-1992, post-1992, RLUK, etc) to which your institution belongs