

How Usage Based Pricing Can Level the Playing Field

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Spending Drivers for Acquisition of Electronic Resources

Traditionally, serial purchases (including databases) have been driven by faculty and are ultimately a request driven model. Usage based pricing, with an emphasis on institution wide use, takes some of this decision making away from faculty and puts it into the hands of the entire university community. Suddenly what faculty say is important, or what they say the Library should be spending its money on, is countered with publishers or vendors who trot out use statistics to show that no, what the Library should be spending its money on is what is being used. Usage based pricing would take into account the entire university community's use, and not just faculty preferences. Consequently, such a change in pricing and collection development has the possibility to lead to some conflict between student needs and use and faculty needs and use.

A strong move towards usage based pricing on the part of vendors and publishers would force academic libraries to re-examine the traditional role of spending the majority of their collections budgets on faculty research needs. For example, many of the most widely used electronic resources at Simon Fraser University are amongst the least expensive and most general of our resources.

When considering periodicals, three of the four most used periodicals at the SFU Library according to our Scholarly Stats usage data are fulltext newspapers found in aggregator databases.

Usage Patterns of Electronic Resources

Simon Fraser University (SFU) usage patterns tend to follow the rise and fall in student population throughout the year, with the lowest usage rates being in August. This would make me believe that the majority of usage is tied to student use, even though faculty are actively doing research. Alternatively, faculty may simply not do a lot of online research in August. In September the SFU Library conducts intensive first year psychology workshops, with every Psych 101/102 class getting an instructional session in using PsychInfo and PsycArticles along with a class assignment that requires the use of PsychInfo. Consequently this drives up usage of those resources. This raises the question: “does instructional use of a resource qualify as usage in the same sense that vendors interpret it as?”

Is straightforward usage based pricing (simple usage based pricing) a realistic model for resources that are wide open to the user community? Or is more refined model needed?

Critiques of Simple Usage Based Pricing

Pricing based strictly on usage is open to many legitimate criticisms, including the interpretation of usage; problems with comparing different vendor's usage (e.g. interface

effect); penalizing institutions for instructional use; use may be based on ease of access (for example fulltext being accessed as a result of link resolvers). Also, simple usage based pricing places too much emphasis on simple use with no thought given to the kind of use the resource is getting. For example, is the resource being used for pleasure reading, for class readings, for student research or for faculty research?

These same critiques also hold for library use of usage data when we do simple cost per use analysis based on what we pay divided by simple usage stats. We don't know what kind of usage the resource is getting. Is this usage simply pleasure reading, assigned class readings, research for student research papers, or for faculty research?

Comparing Citations to Usage

In 2006 the SFU Library looked at a random sample of SFU authored papers from 2005 in Web of Science to see what was being cited by our faculty. Comparing these results to usage statistics for 2005 one sees that some thought must be given to how a journal is used, and not just how much it is used, if usage based pricing is to be implemented. The top 30 most used journals in 2005 were compared to the number of times they were cited in 2005 based on a random sample of SFU faculty authored papers in Web of Science.

Table 1. Ranking by usage at SFU

Journal Title	Citations	FT downloads	Usage Ranking	Citation Ranking
Nature	128	23,706	1	2
Science	126	17,965	2	3
Journal of Personality & Social	0	7,596	3	26

Psychology				
Journal of the American Chemical Society	122	7,247	4	4
Cell	45	4,392	5	5
Journal of Consulting & Clinical Psychology	9	4,262	6	17
American Psychologist	6	4,133	7	19
Journal of Organic Chemistry	15	3,694	8	11
Journal of Applied Psychology	6	3,563	9	20
Tetrahedron Letters	16	3,514	10	10
Developmental Psychology	1	3,268	11	24
Social Science & Medicine	1	3,264	12	25
Journal of Abnormal Psychology	5	3,241	13	21
Carbohydrate Research	13	3,112	14	13
Journal of Educational Psychology	0	2,768	15	26
Psychological Bulletin	13	2,728	16	14
Organic Letters	2	2,714	17	22
Angewandte Chemie International Edition	31	2,607	18	8
Current Biology	28	2,505	19	9
Journal of Physics: Condensed Matter	12	2,387	20	16

You can see that Journal of Personality and Social Psychology is third most used, but had zero citations in the random sample. You can also see that a preponderance of the most used journals are from psychology, leading to the hypothesis that the strong research and information literacy efforts made with first year psychology students has an impact on usage of e-resources in psychology.

Table 2. Ranking by citation frequency from SFU random sample

Journal Title	Citations	FT downloads	Usage Ranking	Citation Ranking
APS-Physical Review Letters	182	2,228	24	1
Nature	128	23,706	1	2
Science	126	17,965	2	3
Journal of the American Chemical	122	7,247	4	4

Society				
Cell	45	4,392	5	5
AIP-Applied Physics Letters	43	2,223	25	6
Nucleic Acids Research	36	2,348	21	7
Angewandte Chemie International Edition	31	2,607	18	8
Current Biology	28	2,505	19	9
Tetrahedron Letters	16	3,514	10	10
Journal of Organic Chemistry	15	3,694	8	11
Analytical Chemistry	14	2,136	28	12
Carbohydrate Research	13	3,112	14	13
Psychological Bulletin	13	2,728	16	14
Tetrahedron	13	2,343	22	15
Journal of Physics: Condensed Matter	12	2,387	20	16
Journal of Consulting & Clinical Psychology	9	4,262	6	17
SPIE Conference Proceedings (Proceedings of SPIE)	7	2,300	23	18
American Psychologist	6	4,133	7	19
Journal of Applied Psychology	6	3,563	9	20

Interestingly, the most cited journal only ranks 24th in usage. So the journal that could be considered of most importance to SFU faculty in terms of their research is not even in the top 10 in usage.

Obviously, citation is a definite indicator of the type of usage a journal is getting and of its importance to faculty research at the university. The lack of correlation (outside of four of the top five most used journals) between citation and usage rates shows that simple usage is not a genuine indicator of the importance of a journal to faculty research.

Holistic Usage Pricing

Simple usage statistics do not capture the true use of journals and other e-resources.

Therefore there is a need to move the pricing away from simple usage and towards a more holistic approach to usage. Pricing should not be based only on the consumption of information, but on what the information is likely to be used for.

Usage based pricing must take into consideration not just simple usage, but also how the journal is being used (e.g. citation rates; type of institution – research intensive, primarily undergraduate etc.) and if the resource is being used as a publishing outlet since publishing in a journal does demonstrate the level of importance of that journal to faculty.

Also note that usage based pricing schemes should do away with the need for concerns about satellite campuses, as they should easily be incorporated into the institution wide numbers. Consequently, if a usage based pricing scheme is going to take into account the true use of a resource it will need to move beyond simple usage and take into account a myriad of factors that can be used to measure how a journal is used at institutions.

Even with these new parameters of holistic usage pricing, if usage based pricing were adopted the price of some resources would be driven by student use. Thus student use would drive the allocation of certain library resources with the possibility that student needs will gain in importance in the library's collections budget.