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A comparison of an open access university press with traditional presses: Two years later ¹

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Abstract. This study is a comparison of AUPress with three other traditional (non-open access) Canadian university presses. The analysis is based on the rankings that are correlated with book sales on Amazon.com and Amazon.ca. Statistical methods include the sampling of the sales ranking of randomly selected books from each press. The results of one-way ANOVA analyses show that there is no significant difference in the ranking of printed books sold by AUPress in comparison with traditional university presses. However, AUPress, can demonstrate a significantly larger readership for its books as evidenced by the number of downloads of the open electronic versions.

Keywords: Open access, OA, open publishing, university press

1. Introduction

This investigation is an update (two years later) on a comparison of the Amazon sales ranking of Canada's first open access press, Athabasca University Press (AUPress) with three other traditional Canadian university presses, which do not support open access. The original study showed that there was no significant difference in the sales rankings of the three traditional presses and the open access press [2]. The generalizability of the data in the original study was limited because it was conducted over a short period. This additional data can confirm whether the original findings hold true over a longer time period.

The analysis is based on physical book sales rankings on the largest online book retailer: Amazon.com and the Canadian version: Amazon.ca. Statistical methods are used to determine whether or not the traditional university presses show higher or lower sales rankings than the open press. This includes the sampling of the sales ranking of eleven randomly selected recently released books from each press on two occasions separated by three months in 2010 and one occasion two years later in 2012.

Unlike traditional university presses, AUPress allows free downloading of its online edition under a Creative Commons (Attribution-Noncommercial-No Derivative Works 2.5 Canada) license and sells copies of its print editions. Open access is a model for scholarly publishing in which authors and publishers make their content freely available online with no requirements for authentication or payment.

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Table 1
Rank number [3]

Rank #	Rampant press copies sold/day	Sampson copies per week
>#1	3000	>1000 copies per week
>#10	650	200–1000 copies per week
>#100	100	100–200 copies per week
>#1000	13	10–100 copies per week
>#10,000	2.2 (11 copies every 5 days)	1–10 copies per week
>#100,000	0.2 (1 copy every 5 days)	<200 books sold
>#1,000,000	0.006 (3 copies every 500 days)	<40 books sold
>#2,000,000	0.0001 (1 copy every 1000 days)	1 book ordered

AUPress is Canada's first fully open academic publisher., founded in 2007, releasing its first book in 2008. See <http://www.aupress.ca/>.

2. Amazon sales ranking

The Amazon sales ranking number is provided as a service for authors and publishers and can be one reasonable gauge of the number of printed books purchased. The ranking provides a relative measure that is useful for assessing a book's sales performance on Amazon. The lower ranking number of a particular book can be interpreted as signifying higher sales. Two ranking lists were studied, based on both Amazon.com and Amazon.ca sales, which are updated each hour to reflect recent and historical sales of every book sold on the respective web sites. For competitive reasons, Amazon does not release actual sales information to the public, so very few, if any people outside of Amazon know the actual sales numbers [1].

Rampant Tech Press [3] and Sampson [5] have independently ventured to extrapolate the sales to a ranking order. They have come up with similar information displayed on the following table (Table 1).

3. Methodology

Stratified sampling is a common probability method that is considered to be better than random sampling because the stratification reduces sampling error. The relevant stratum in this case was a subgroup of books published between 2008 and 2010. This was necessary because the targeted population consisted of AUPress books. As AUPress is new, it only had published books in those years. Random sampling was then used to select a reasonable number of samples ($n = 11$) from each publisher. This provided the researchers with confidence that the strata represented each population reasonably well and accurately represented the overall publications in the years under investigation. Limiting the other presses to a subgroup made up of their most recent books published ensured a fair comparison with the new AUPress.

The sampled publications were then investigated to determine their ranking order on both Amazon.com and Amazon.ca. It was considered appropriate to investigate both "stores" as it was expected that Canadian scholarly publications would be relatively better sellers in Canada than internationally. The survey was also conducted on three dates, the first two separated by three months and the last by one year (January and April, 2010 and April, 2012). This date separation is recommended to get more

trustworthy ranking numbers as the numbers can be skewed drastically if measured on any one occasion [4–6].

4. Investigation

The investigation aimed to determine whether or not there was a significant difference in the ranking of the books in the open press and any of the traditional presses. AUPress (AUP), which is the open access university press was compared to the following three traditional presses: University of Toronto Press (UTP), University of Calgary Press (UCP) and University of Alberta Press (UAP) in terms of sales ranking of these presses from Amazon (amazon.ca & amazon.com).

The *Null Hypothesis* was posited that the mean sales ranks of AUP, UTP, UCP and UAP are equal. This was tested by the ANOVA analysis against the *Alternative Hypothesis* that the mean sales ranks of AUP, UTP, UCP and UAP are not equal.

The Amazon.com and Amazon.ca ranking results for these four university presses are available for March, 2011; and for March, 2012. They can be accessed online at dropbox <http://dl.dropbox.com/u/10064077/Tables%20for%20download.doc>.

A total of 4 data sets for each of the presses were used for the data analysis. Table 2 shows the mean, standard deviation and standard error of all the four university presses. One-way ANOVA was then used to test if there is any significant difference among these four presses. *The result (Table 3) shows there is no significant difference $F(3,172) = 0.127, p = 0.944$, therefore the Null Hypothesis cannot be rejected.* This implies that academic books on open access do not lessen printed book sales online at Amazon in comparison with traditional university presses.

5. AUPress book downloads

In the six months prior to this survey first being conducted, there were a total of more than 20,000 individual downloads, of which more than 10,000 were full books. The average total number of down-

Table 2
The mean, Std deviation and Std error

Presses	N	Mean	Std deviation	Std error	Minimum	Maximum
AUP	44	1,799,058	2,123,215	320,087	35,795	8,398,821
UTP	44	1,895,562	2,198,545	331,443	54,215	8,023,479
UCP	44	1,759,469	1,416,036	213,475	142,280	5,019,938
UAP	44	1,647,483	1,793,872	270,436	25,085	5,156,229
Average	44	1,775,393	1,882,917	283,860	64,344	6,649,617

Notes: AUP: Athabasca University Press, UTP: University of Toronto Press, UCP: University of Calgary Press, UAP: University of Alberta Press.

Table 3
One-way ANOVA analysis results

Source	Sum of squares	df	Mean square	F	Sig.
Between groups	1.391e ¹²	3	4.637e ¹²	0.127	0.944
Within groups	6.263e ¹⁴	172	3.641e ¹²		
Total	6.277e ¹⁴	175			

loads was 1,500 and the full book average was over 800. The median download rate for full books was 152 and the total downloads median was 277 (including chapters). Some of the more popular scholarly books, particularly those in the elearning field, had more than 3000 full book downloads and over 7000 total downloads (including chapters). The most recent download Table is also available at dropbox <http://dl.dropbox.com/u/10064077/Tables%20for%20download.doc>. The Amazon ranking data suggests that, at least in one measure, open access books sell as well as traditional press books, and the large number of downloads of open access books point to a significant advantage over traditional publications in terms of total number of readers.

Several books have also won distinguished international academic awards and have been reviewed and cited in leading scholarly journals. So, open access scholarly publications can claim a much higher and more global readership than traditional scholarly publications. The Amazon ranking data suggests that, at least in one measure, open access books sell as well as traditional press books, and the large number of downloads of open access books point to a significant advantage over traditional publications in terms of total number of readers.

6. Conclusion

Results show that there is no significant difference in the Amazon rankings. This suggests that releasing academic books on open access does not lessen printed book sales online in comparison with traditional university presses. Nevertheless, the results of this investigation must be viewed with some caution. These results cannot be easily generalized to other book sales. Causation has not been proven. In addition, the wide differences among the rankings of individual books were not factored into this study. As more open access presses are established, a larger sampling pool should be used.

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