

OPEN ACCESS PUBLISHING - A STATUS FROM THE UNIVERSITY OF TROMSØ

Jan Erik Frantsvåg

Introduction

While preparing for the establishing and creation of rules for the publishing fund of the University of Tromsø, one of the problems we had was that we had very little knowledge about the actual level of Open Access (OA) publishing by authors based at the university. Through arrangements with BioMed Central (BMC) we knew there was some OA published in journals charging Article Processing Charges (APC), and through our own publishing activities we also knew there was some level of publishing in institution-based for-free OA journals. But we had no numbers.

so an article with many Tromsø authors but with a corresponding author from another institution would not qualify. The deal covers one year from July 2010 to June 2011.

What do the numbers tell us? It seems reasonable to say that hybrid OA could be an option for an important number of articles.

The table below shows the Open Access and total number of articles published with Springer in 2009 and 2010, first for the four institutions participating in

Table 1 Open Access and Total number of articles published with Springer

	OA (hybrid) Springer				Total Springer				Per cent OA (hybrid)			
	2009	Spring 2010	Autumn 2010	Total	2009	Spring 2010	Autumn 2010	Total	2009	Spring 2010	Autumn 2010	Total
University of Tromsø	5	7	29	46	126	87	64	277	4,0 %	8,0 %	45,3 %	16,6 %
University of Oslo	22	12	98	154	391	404	213	1399	5,6 %	3,0 %	46,0 %	11,0 %
University of Bergen	11	6	49	77	236	189	120	781	4,7 %	3,2 %	40,8 %	9,9 %
Norwegian University of Science and Technology	13	6	49	81	318	245	144	1025	4,1 %	2,4 %	34,0 %	7,9 %
Total for members of the Springer deal	51	31	225	358	1071	925	541	3482	4,8 %	3,4 %	41,6 %	10,3 %
Some other institutions												
Norwegian University of Life Sciences	1	1	3	6	40	53	38	171	2,5 %	1,9 %	7,9 %	3,5 %
Norwegian Institute of Marine Research	1	2	2	6	36	12	20	104	2,8 %	16,7 %	10,0 %	5,8 %
Norwegian School of Veterinary Science			2	2	16	7	11	50			18,2 %	4,0 %

After the publishing fund had been established, in January we more or less by accident stumbled across two sources of information that now gives us some interesting - and possibly also surprising - knowledge about the OA publishing level of our researchers.

Publishing with Springer

One source of information was the Springer website AuthorMapper (<http://www.authormapper.com/>) where we realized we could find information about authors from Tromsø publishing hybrid OA articles with Springer. From the access point of view, hybrid OA (where the author pays to make an article in a subscription based journal OA) is just as OA as OA in purely OA journals.

While Springer Open Choice (Springer's hybrid solution) isn't the only hybrid solution around, it is very important to us. The University of Tromsø (with the Universities of Bergen and Oslo and the Norwegian University of Science and Technology) in 2010 negotiated a deal with Springer where authors at the four institutions could use Springer Open Choice free of charge. The option of using this clause in the deal was restricted to the corresponding author only,

the Springer deal giving free Open Choice, then for some other rather randomly chosen institutions. What we see is that when the deal starts working, in the autumn term of 2010, there is a significant increase in the number of OA articles. The percentage of OA Springer articles goes from around 4 to more than 40 overall, with some variation between institutions. There is no similar strong trend for the institutions that are not partners in the deal; the actual number of OA articles is too small for differences from term to term to be significant.

That the participants do not reach 100 per cent OA is of course due to the fact that authors from these institutions co-author many articles where the corresponding author belongs to some other institution. The differences between the institutions could possibly be ascribed to variations in the "normal" number of co-authors in different disciplines and how large a fraction of authors come from a participating institution. E.g., the Norwegian University of Science and Technology has quite a different research profile from the other three. The University of Tromsø, unlike the other ones, seems to have an increase in OA in the spring term 2010, but

then again the actual numbers are too small to draw strong conclusions.

It does, however, look as if at least 175 articles has become OA due to the deal, that otherwise would have been TA. (225 OA articles in the autumn of 2010 compared to 31 in the spring term.) Given a total number of articles from the four participating institutions of about 10,000 (10,026 reported in 2009 according to statistics from the Database for Statistics on Higher Education¹) this amounts to about 3.5 per cent of the total article output in the period becoming OA through this one deal with Springer.

Numbers from a global study (2010) indicates that about 8.5 per cent of articles were OA articles² in 2009. In such a context, 3.5 per cent of articles becoming OA through this deal probably is a significant increase in the OA share of published articles from these institutions.

Based on this, we should be prepared to discuss if hybrid OA shouldn't be one of the avenues to explore on the way to an OA world.

The level of OA publishing in Tromsø

The impression we had when planning for a publishing fund in Tromsø, was that the level of OA publishing was low. Other funds spoke about 2–5 per cent of articles being funded by the central funds, 3–4 being mentioned most often. With a total number of articles published by Tromsø authors of 1313 in 2009 (numbers from the Database for Statistics on Higher Education) this should amount to somewhere in the region of 40–50 articles per year. Experiences from University of California Berkeley (Eckman 2011) indicates that only 25 per cent of their OA publishing requires money from their fund. But what is the size of OA publishing at the University of Tromsø?

In the end of January, we realized that by combining two resources not built to be combined, we could find an approximate answer to this. By creating the report "Tidsskrifter knyttet til forskningsresultater" in Cristin (Current Research Information System in Norway) for 2010 and copying content directly from the screen into MS Excel, we suddenly had a list of journals with ISSN numbers and the number of articles published in them. In MS Excel, this list could be sorted and manipulated in other ways.

We also had downloaded a list of OA journals from DOAJ (<http://www.doaj.org/doaj?func=csv>). We then

combined the data from Cristin with the DOAJ file. This was done by looking up (using the MS Excel lookup functionality) ISSN numbers from Cristin in the DOAJ file. In this way we identified which journals our researchers had published in, were OA journals. The Cristin file also contained the number of articles published in each of these journals. We did the same for the years 2004–2009, so we could create a time series. Some known sources of errors, like journals listed in DOAJ but with restrictive policies that makes it difficult to say they are truly OA, has been corrected in the numbers. The results are presented in the table below.

Table 2 Number of articles and OA articles per year

OA articles			
Year	Total	OA	OA share
2010	1028	84	8.2 %
2009	979	79	8.1 %
2008	916	71	7.8 %
2007	806	59	7.3 %
2006	710	47	6.6 %
2005	704	49	7.0 %
2004	674	31	4.6 %

This shows both a degree of OA use that was much higher than what we would have believed, and a slow, but continuous, growth over the years. Publishing in OA journals obviously is important to our researchers. We are, however, close to the numbers reported by Bjørk et al (2010).

Through Author Mapper (see above) we also found a number of hybrid articles published with Springer, 3 in 2008, 5 in 2009 and 36 in 2010. If we include these articles in the number of OA articles, we get the following table:

Table 3 Number of articles and OA articles including hybrid per year

Total OA including hybrid			
Year	Total	OA	OA share
2010	1028	120	11.7 %
2009	979	84	8.6 %
2008	916	74	8.1 %
2007	806	59	7.3 %
2006	710	47	6.6 %
2005	704	49	7.0 %
2004	674	31	4.6 %

¹ See

<http://dbh.nsd.uib.no/pub/?rapport=antall&aar=2009&niva=1&insttype=1&instkode=&avdkode=&seksjonskode=>

² The term used in the article is Gold OA, which means that the published article is freely available as OA. I understand this term, as used in the article, to include OA articles in TA journals – Springer Open Choice is an example of this kind of articles.

The inclusion of hybrid articles from Springer results in a stronger growth in OA publishing in the periode 2008–2010, especially from 2009 to 2010. When we realize that Springer is only one of many publishers offering hybrid publication schemes (albeit one of the largest) we may conclude that hybrid OA publishing could create a massive increase in the overall level of OA publishing.

The use of OA is not evenly distributed over the university, doing the same exercise but creating separate Crstin reports for every unit of the university we ended up with this table:

Table 4 OA publishing 2010 per faculty

Unit	Articles			Of these	
	Total	OA	OA share	Hybrid articles	Hybrid share
Faculty of Health Sciences	484	70	14.5 %	20	4.1 %
Faculty of Biosciences, Fisheries and Economics	198	23	11.6 %	11	5.6 %
Faculty of Science and Technology	158	9.5	6.0 %	3.5	2.2 %
Faculty of Humanities, Social Sciences and Education	157	16	10.2 %	1	0.6 %
Tromsø University Museum	31	2.5	8.1 %	0.5	1.6 %
Faculty of Law	25	0	0.0 %	0	0.0 %

(I am – of course – proud that the University Library has an OA share of 100 per cent, but the actual number of 2 is not really a significant number.) The total number of articles does not match that in table 1 or 2, when reporting per unit every multi-authored article with authors from more than one unit will be counted once per unit.

We see that OA is most important at the biomedical faculties and in the humanities and social sciences. STM has a large number of commercial OA journals available for publishing in, including hybrid journals, while humanities and social sciences has a number of institution-based journals that do not charge Article Processing Charges.

References

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Jan Erik Frantsovåg Universitetsbiblioteket, IT-drift, formidling og utvikling, Universitetet i Tromsø, Norway