Publication productivity in the sciences at research universities

Rob Donnelly   Mathematics & Statistics   Murray State University

In a collegiate discussion of research expectations, it could be useful to have some data on relative productivity of publishing in various disciplines. Two senior mathematics colleagues of mine brought to my attention a 1995 report by the National Research Council, *Research-Doctorate Programs in the United States: Continuity and Change*. This report provides some such data, at least for research universities. An update of this study should be coming out soon.[*]

The report provides discipline-specific data. Those universities with doctoral programs in a given discipline are ranked using a certain quality rating. The universities are grouped into quarters. Within each quarter, some summary data is given. Below is data for various science disciplines on the average number of publications per faculty member within each quarter for the five-year period 1988 through 1992. This is taken from Appendices L and N of the report.

Some very important qualifiers: (1) These numbers are averages, not minimums. (2) These are five-year averages, not annual averages. (3) These averages are for faculty at research/doctorate-granting institutions, not for faculty at regional public universities such as Murray State where teaching is the primary mission. It is simply not possible for an institution with our academic and budgetary profile to support research on the same scale as that of research universities. This fact certainly limits the usefulness of this data. (4) Note that this data does not distinguish between single-authored and collaborative publications, nor does it account for other qualitative aspects of the publications.

Discipline	Top quarter mean	2nd quarter mean	3rd quarter mean	4th quarter mean
Astrophysics and Astronomy	13.09	11.46	10.04	6.88
Biochemistry and Molecular Biology	11.87	8.34	5.79	4.62
Cell and Developmental Biology	11.79	7.17	5.67	3.59
Chemistry	16.63	11.38	8.38	5.73
Computer Science	4.50	3.45	2.76	1.57
Ecology, Evolution, and Behavior	7.03	5.33	4.64	3.65
Geosciences	8.04	4.92	3.72	2.37
Mathematics	4.51	3.66	3.09	2.73
Molecular and General Genetics	12.67	8.02	6.11	4.51
Neurosciences	11.97	9.31	6.23	5.21
Physics	9.75	8.65	7.14	5.82
Statistics and Biostatistics	6.95	5.16	6.53	5.02

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[*]http://www7.nationalacademies.org/resdoc/