About Academic Analytics

Academic Analytics, LLC is a full service provider of academic intelligence data. We are a private company, based in the Long Island High Technology Incubator at Stony Brook University in New York. Since 2005 we have been producing an annual database on faculty scholarly productivity.

Originally used solely to rank doctoral programs, Academic Analytics has re-invented itself during the last two years and transformed from a company that publishes ranking tables into a higher education service provider geared to delivering accurate and timely academic business intelligence to university administrators. This transformation has been guided through partnerships with three of the key institutions in the AAU data exchange (MIT, Ohio State University, and the University of Colorado at Boulder).

Ours is a unique tool that helps empower university leaders in a variety of ways, some of which include: establishing standards, allocating resources and monitoring performance. The uses for our data are as varied as the universities themselves.

The Faculty Scholarly Productivity Database

The Faculty Scholarly Productivity (FSP) Database for FSP 2008 includes information on 168,068 faculty members, associated with 8,849 Ph.D. programs, at 387 universities in the United States. To enable comparisons among performance data across universities, faculty members are coded to 172 disciplines, which are based on the National Center for Educational Statistics’ (NCES) Classification of Instructional Programs (CIP) coding scheme. Faculty is then aggregated into two higher levels of classification. The last level contains eleven broad fields (Agricultural Sciences, Biological and Biomedical Sciences, Business, Education, Engineering, Family and Consumer and Human Sciences, Health Professions Sciences, Humanities, Natural Resources and Conservation, Physical and Mathematical Sciences and Social and Behavioral Sciences). As data are aggregated into increasingly higher levels, both faculty names and data are de-duplicated.

To facilitate broader comparisons, we have developed the Faculty Scholarly Productivity Index (F SPI) that permits comparison of scholarly performance across disciplines within a university and comparison of overall institutional performance between universities. This index uses metrics that are independent of discipline values and of the portfolio of disciplines at universities to rank programs within a discipline, universities within a broad field, or entire universities when such a ranking is desirable.

The FSP 2008 includes data on the primary areas of scholarly accomplishment represented in Ph.D. education in the United States:

The Publication of Scholarly Work

- 54,584 books authored or edited (six years of data in each database)
- 1,044,996 journal articles published (three years of data in each database)

Books

For each FSP database year we include the prior six years of scholarly books published by university and commercial presses. The FSP database includes:

- Total number of books published by the faculty in the discipline
- Number of faculty members who have published a book
- Percentage of faculty who authored a book
- Book publications per faculty

Journal Publications

We include the prior three years of journal articles using data from Scopus, covering more than 18,000 journal titles worldwide. For each program in each discipline (and aggregated fields) the FSP database includes:

- Total number of articles published by the faculty in the discipline
- Number of faculty members who have published an article
- Percentage of faculty who authored a journal article
- Journal publications per faculty

Citations of Journal Publications

We include four years of citations to journal articles using data from Scopus (four years of data in each database) – 10,030,163 citations attributed to papers by faculty members in the database. For each program in each discipline (and aggregated fields) the FSP database includes:

- Total number of citations to journal articles
- Total number of faculty with a citation
- Percentage of faculty with a citation
- Citations per faculty member
- Citations per publication
The Funding of Scholarly Work

For the FSP 2008 database, we track research grants from nine federal agencies and one foundation source. There are 394,911 grants matched to individuals in the FSP 2008 with $206,542,401,098 of funding matched to faculty principal investigators. The FSP Index focuses on new competitive research grants only. Hence, FSP Index tracks 108,857 grants representing $20,182,530,282 of federal funding.

Research Grants and Fellowships

We include data on research grants from the National Science Foundation, National Institutes of Health, Department of Defense: Army Research Office and Office of Naval Research, Department of Education, Department of Energy, National Aeronautics and Space Administration, National Oceanographic and Aeronautic Administration, Federal Aviation Administration, United States Department of Agriculture, and the American Heart Association. This data includes:

- Total number of new grants awarded
- Average annualized funding for grants awarded
- Total number of faculty with grants awarded
- Percentage of faculty with a grant
- Grants per faculty
- Research dollars per faculty
- Research dollars per grant

Awards and Honors

We include data on 2,923 awards and honors from 395 organizations in the US and worldwide. Duration for inclusion varies from five to 50 years depending on the prestige of the award or honor—awards and honors are matched to 32,749 recipients.

- Total number of awards held
- Total number of faculty holding awards
- Awards per faculty
- Percentage of faculty holding an award or honor

Proprietary software completes the Faculty Scholarly Productivity database. The database presents information on over 35 variables in both raw data and z-score formats, maintaining a high degree of flexibility. For example, Academic Analytics assigns weights to data elements to organize the data, create tables and produce the summary FSP Index. The weights we assign are merely suggestions; they are only one way to organize the data. Should an expert panel in a particular discipline recommend that citations per author is a more accurate way of viewing faculty competitiveness than total citations per program, a client can use that variable as the only way of looking at citations. Should a client decide that book publications is not a meaningful variable in a specific discipline, the client can ignore that element altogether and reorder the discipline a way that accords to the client’s views.

The data contained in the Faculty Scholarly Productivity (FSP) Database provides valuable information that can be used at all levels of higher education administration to assess, monitor and improve performance and support strategic management. Below are some examples of how the database can be used by different levels of administration.

At the institutional level:

- Full institutional data contributes to the selection of appropriate peers, providing the basis for meaningful program and institutional comparisons
- Program level and broad field data provide sound information on institutional strengths and weaknesses
- The database provides information that supports allocation or re-allocation of resources to improve targeted programs or manage tight budgets
- Program data can inform the administration's evaluation of the performance of college, school and departmental leadership

Our data illustrates and provides information on:

- Program performance in terms of sponsored research compared to other indicators
- Possible actions to support faculty in their research efforts
- Positive points to highlight for recruitment materials
- Program data can support the selection of external reviewers from whom you can learn the most in key areas
- Support requests for funding and demonstrate a return on those investments