2018 NFAIS Lightning: Dimensions

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Open? app.dimensions.ai
Collaborative? 100+ development partners
Transformative? “What is it?”
Dimensions is a database of awarded grants.

Dimensions is from UberResearch.

https://figshare.com/articles/A_Guide_to_the_Dimensions_Data_Approach/5783094

or

go to figshare.com, search ‘Dimensions’

What is the ‘inclusive’ approach?
Data integrated in multiple dimensions - pun intended

- Pre-publication: 1-5 years from grant to publication
- Post-publication: immediate, 2-3 years, years, years, decades
Enriched and interlinked – a modern approach to research data management

Dimensions data
- Clinical trials
- Policy docs
- Publications
- Patents
- Grants
- Data sets
- Altmetric

Enrichment
- Institution identification
- Categorization
- Concept extraction
- Researcher disambiguation
- Reference extraction

Enriched metadata
- Concepts
- Researchers
- Organizations
- Classifications
- References
- Metrics
The data and links driving Dimensions...

- **8m articles with Altmetric Attention Scores**
  - 51M mentions
  - 8M links to funders

- **3.7m grants**
  - $1.3 trillion in funding

- **90m Publications**
  - improved metadata of 50m
  - 900M links

- **380k Clinical trials**
  - 350K links

- **320k Policy papers**
  - (Q2 2018)
  - 170K links

- **320M links**

- **34m patents**
  - 320M links
  - 9M links

- **139K links**

- **900M links**

- **11M links**

- **43K to funders**

- **32M to funders**

- **dimensions.ai**
As a __________, I want to ________________.
Dimensions Badges

https://badge.dimensions.ai/

124 CITATIONS

124 Total citations
123 Recent citations
170 Field Citation Ratio
21 Relative Citation Ratio
The Dimensions API

Powerful API - designed to allow flexible use of the enriched data

- Use without constraints for internal purposes
- Use data outside of the web-app; e.g. in admin systems or analytical software
- Importantly, the Dimensions API is for analysts (and not just for programmers)
Innovate!

- Build your own in house applications based on the Dimensions API

Example: International Linkages dashboard...
The Dimensions API

Innovate!

- Build your own in house applications based on the Dimensions API

Example: Institutional Collaboration by Fields of Research
The Dimensions API

**Innovate!**

- Invent your own metrics

Example: PGI (publications per active grant)

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**A Composite Indicator for Publications per Grant**

The Dimensions platform provides access to global data for both grants and publications and makes possible the construction of links between different aspects of research. The dataset will enable increasingly sophisticated composite indicators to be created as needed by the research community. We explored a simple composite indicator: the ratio of publications to active grants. This is an imperfect representation of research inputs and outputs, but it offers real value for exploratory purposes. For example, a high ratio of publications to grants (relative to a subject average) might indicate research areas that do not attract grant funding (e.g., Complementary Medicine); strong industry funding (e.g., Pharmaceutical companies); or internally collaborative research.

To create a Publications-to-Grants Indicator (PGI), we took articles published after 2015 and compared this to a count of active grants in the period 2015–17. Active grant count (as opposed to the funding amount) addresses varying award lengths and funding systems in different countries and is more meaningful for cross-disciplinary comparisons. Indicators were calculated for data grouped in categories denoted by common FoR codes for grant and publication classification.
The Dimensions API

**Innovate!**

- Ask new questions of the Data
- ...or even just automate current analysis tasks that you normally do by hand

Top 30 research institutions and their top 5 collaborators by publication volume 2010-2017
Thank you.

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