Library Workshop Series: Information in the Research Process

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Outline

1. The life-course of a research project
2. The varieties of academic output
3. Style in communicating information

• how to integrate the information into research process; and
• the ways to develop a research topic
1. Life-course of a research project

1. Initial **concept** and core team selection
2. Detailed planning and **grant applications**
3. Actual research, including
   - Team building and management
   - Problem solving, compromising, changes of direction
   - Networking, conferences, stakeholder meetings
4. **Publications**, leading to the next cycle
Where is INFORMATION in all this?

- Ideas for new research need:
  - A gap in existing knowledge (question)
  - An approach to filling it (answer)
- Argue that the question is of interest
- Argue for the viability of the proposal
- Argue for the strength of the team
- Argue that the research will have impact
Early studies focused on the health effect of total suspended particulate (TSP). Researchers had found that the increase of TSP concentration was associated with the prevalence of preterm delivery and low birth weight among Beijing population (Xu et al., 1995; Wang et al., 1997).

With the development of research methods, more studies have been conducted on the impact of coarse and fine particulate matter on adverse birth outcomes. The majority of researchers reported that the concentration of air coarse and fine particulate matter was related with adverse birth outcomes such as preterm birth, low birth weight and small for gestational age (Wilhelm and Ritz, 2005; Leet al., 2012; Fleischer et al., 2014; Hyder et al., 2014), but the susceptible period and the intensity of impact differed significantly between these studies.

Moreover, there were still studies that questioned the existence of such health effect (Maisonet et al., 2001; Hansen et al., 2007; Gehring et al., 2011; Sathyanarayana et al., 2013).
Single best source of new ideas?

1. Colleagues, friends, students.
2. A lot of publishing is REACTIVE:
   • Work that you disagree with;
   • Work that you think could be taken further, or done better;
   • “Me too” work, e.g. duplicating others’ work in your continent or country
2. The varieties of academic output

Name some ... ?
My own output:

139 peer-reviewed journal articles
  • 3 single-author
  • 5 with two authors
  • 23 with three
  • **105 with >3**

8 peer-reviewed systematic reviews (mostly with many authors)
6 editorials / commentaries (one or two authors)
5 technical reports (mostly single author)
6 book chapters (mostly 2 or 3 authors)
0 books 😞
Messages

• Use all opportunities that come your way: it’s not just original research reports. Information OUTPUT is as important as INPUT

• Whether you cite it or not, you have to know the background literature: even for a radio interview

• Collaborate extensively!
3. Have some style!

• Use MS-Word **styles** in your writing
  • Easier to choose ideal formatting
  • Avoid formatting errors
  • Use tools like keep-with-next, keep-together
  • Avoid blank lines (space before/after is better)
• Use lots of pictures, diagrams, graphs, charts
• Use professional graphics software
  (not Excel, unless you *really* know what you’re doing)
Samir Bhatt, Peter W. Gething, Oliver J. Brady et al.

*The global distribution and burden of dengue*

*NATURE, 25 April 2013*
Joeri Rogelj, Malte Meinshausen and Reto Knutti

*Global warming under old and new scenarios using IPCC climate sensitivity range estimates*

*Nature Climate Change, 5 February 2012*
Questions