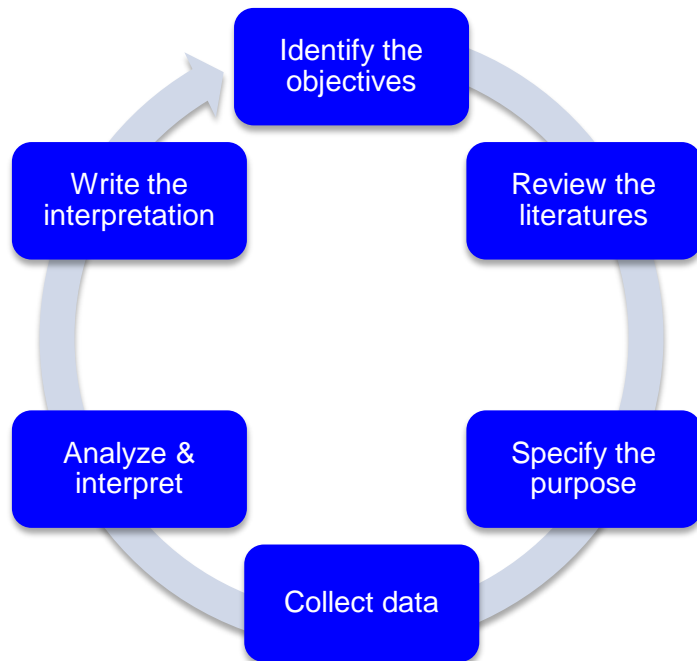


Research 1-2-3: To author, to get published & to get cited

Wong, Woei Fuh
Senior Consultant, iGroup/
General Manager of Consulting, Innovative Education Services

October 2015

The challenges of a researcher



“Where is the magical button  ?”

Caveat

The tips and suggestions that I will present are based upon my experience as a young researcher and a scientific information business insider; and these may not be entirely agreeable by your supervisors or applicable to all publishers.



Research 1-2-3



Research 1-2-3

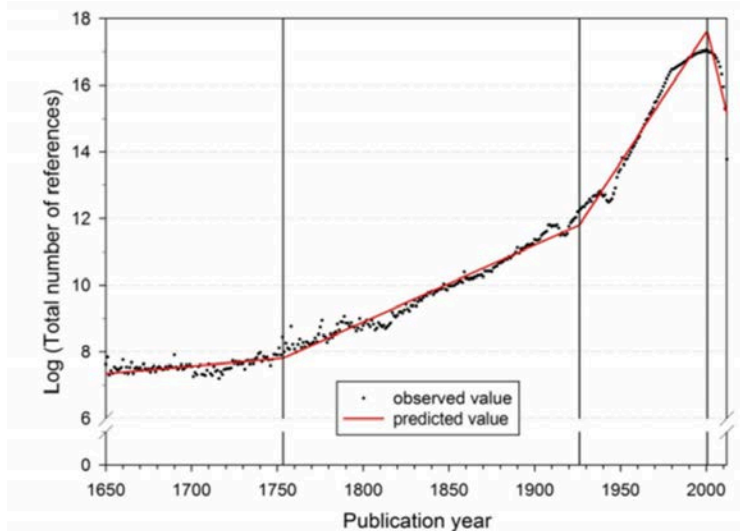


“So much to read, so little time!”

NATURE NEWS BLOG

Global scientific output doubles every nine years

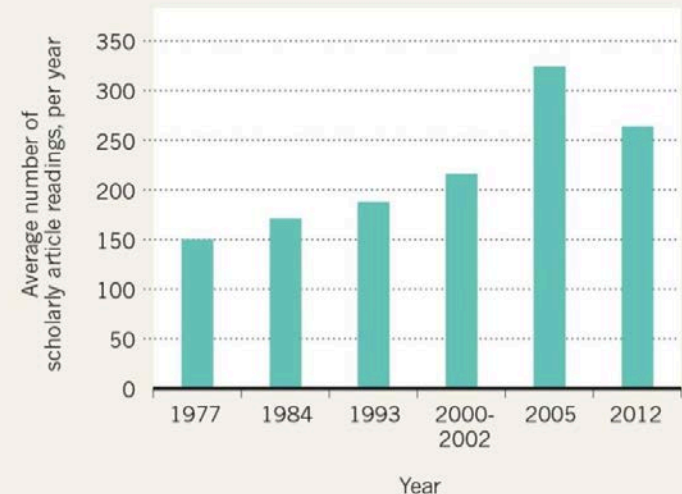
07 May 2014 | 16:46 BST | Posted by Richard Van Noorden | Category: Policy, Publishing



Source: Richard V Noorden, “Global scientific output doubles every nine years”, Nature News Blog, May 2014 <http://blogs.nature.com/news/2014/05/global-scientific-output-doubles-every-nine-years.html>

LESS TIME TO READ?

US faculty reported reading fewer scholarly articles in 2012 than in 2005, countering a 35-year trend.



Source: Carol Tenopir, “Are scientists reading less? Apparently, scientists didn’t read this paper”, The Scholarly Kitchen, Feb 2014 <http://scholarlykitchen.sspnet.org/2014/02/07/are-scientists-reading-less-apparently-scientists-didnt-read-this-paper/>

“Where to begin?”



“What is smart discovery?”

MATRIX OF KNOWLEDGE

Question			
		KNOW	DON'T KNOW
Answer	KNOW	A I know what I'm looking for and have good access to the answer.	B The answer lies somewhere in the data I've collected, but I don't know how to analyze or access it.
	DON'T KNOW	C I know the question, and I just need to collect the right data to answer it clearly.	D I need to leverage the opportunity to access my data so that I can discover insights and drive more intelligent strategies.

A. I know what I know > Retrieve

B. I know what I don't know > Search/retrieve/analyze

C. I don't know what I know > Search/retrieve/analyze

D. I don't know what I don't know > **Smart discovery**

“How do I know my work is original?”



CORNELL CHRONICLE

February 1, 2015

Science, Tech & Medicine

Arts & Humanities

Business, Law & Society

Campus Life

Dec. 22, 2014

'Text overlap' clutters scientific papers, arXiv analysis finds

By Bill Steele

Computer text analysis of a huge database of scientific papers shows a large amount of “text overlap,” where authors use text from previous papers of their own and others, not always with attribution. **This is not necessarily good or bad,** Cornell researchers say.

“Our first goal was **to characterize the accepted practice, not to be judgmental,**” said Paul Ginsparg, professor of physics and information science and founder of the online arXiv collection of scientific papers, now maintained by Cornell University Library. The analysis was conducted on thousands of papers in the arXiv. Ginsparg and Cornell graduate student Daniel Citron reported their study in the Dec. 8 online edition of the Proceedings of National Academy of Sciences.

Source: Bill Steele, “Text overlap’ clutters scientific papers, arXiv analysis finds”, Cornell Chronicle, February 2014 <http://www.news.cornell.edu/stories/2014/12/text-overlap-clutters-scientific-papers-arxiv-analysis-finds>

- “Overlapping” or text similarity is not unusual in the ocean of information even **across disciplines**
- There is a need of originality check while **work are in-progress**

Intentional and unintentional plagiarism

Intentional or
unintentional?

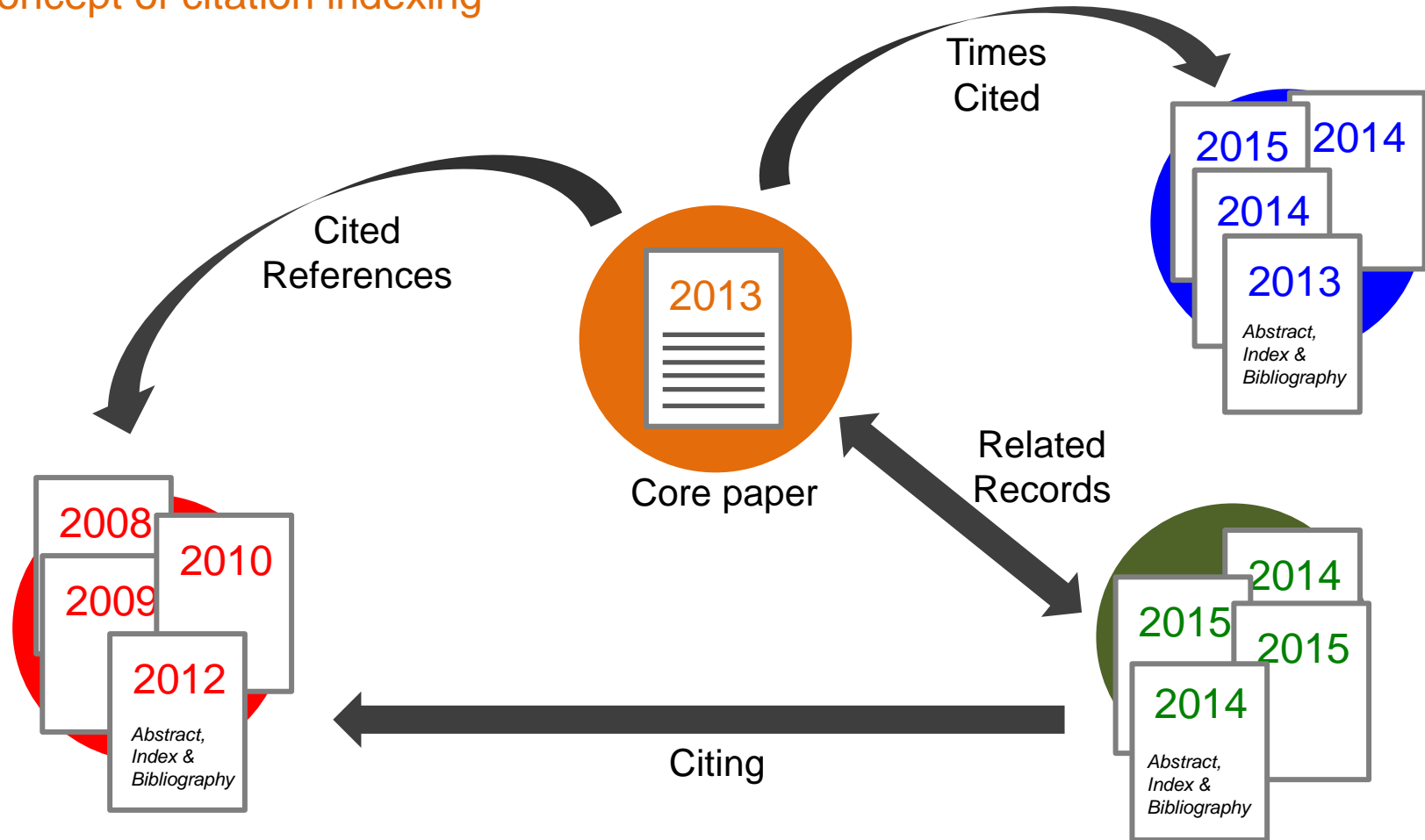
- Plagiarism
- Self plagiarism (e.g. duplicate publication) & self citation
- “Salami slicing”
- Publishing everything versus selective publishing
[Source: Marcel A. L. M. van Assen et al, “Why publishing everything is more effective than selective publishing of statistically significant results”, journals.plos.org](#)

Highly
intentional

- Ghost authorship
- Fraud

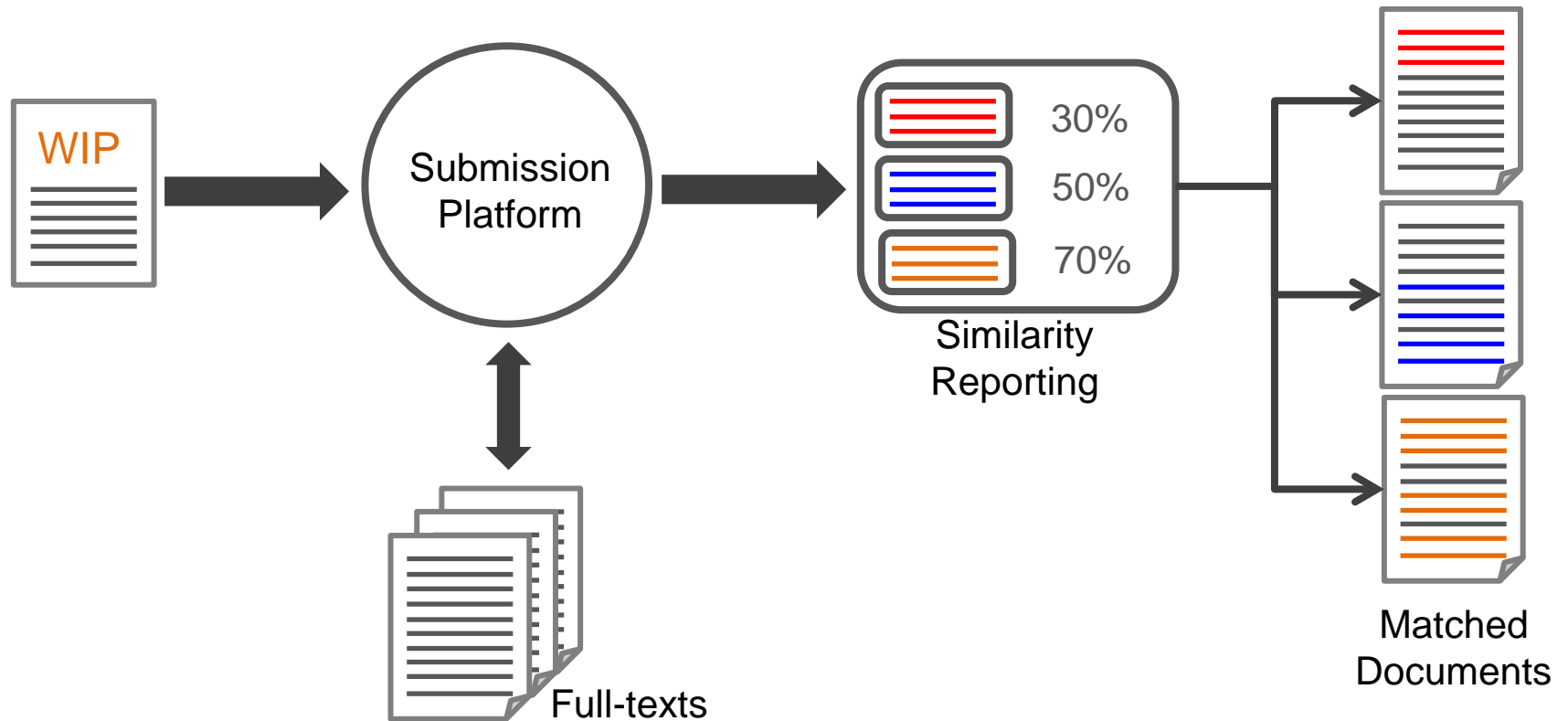
Smart discovery through citation and similarity

Concept of citation indexing

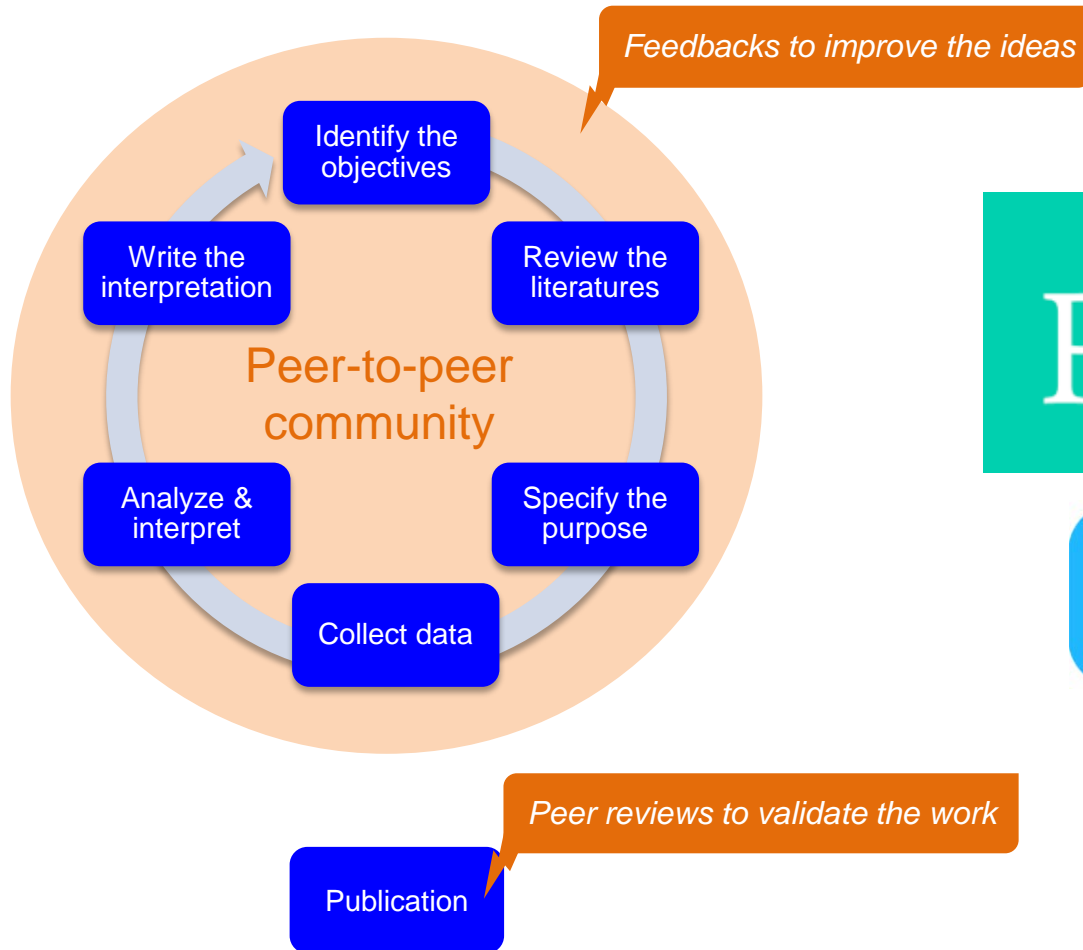


Smart discovery through citation and similarity

Concept of text similarity check



Networking for feedbacks or collaboration



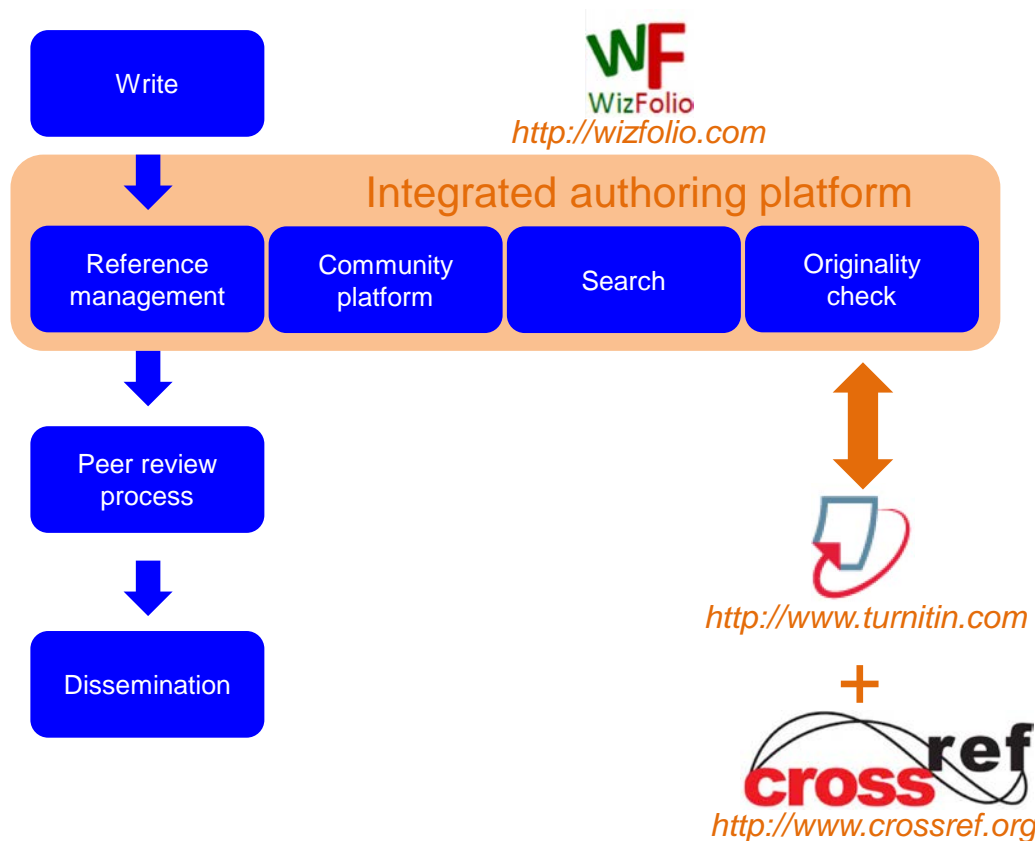
Reference management

- Reference management tools provide different bibliographic styles
- To go beyond, most reference management tools include:
 1. Search capability;
 2. Collaborating platform; and
 3. Document management

- What if we include originality check?



Research workflow integrated with best practices

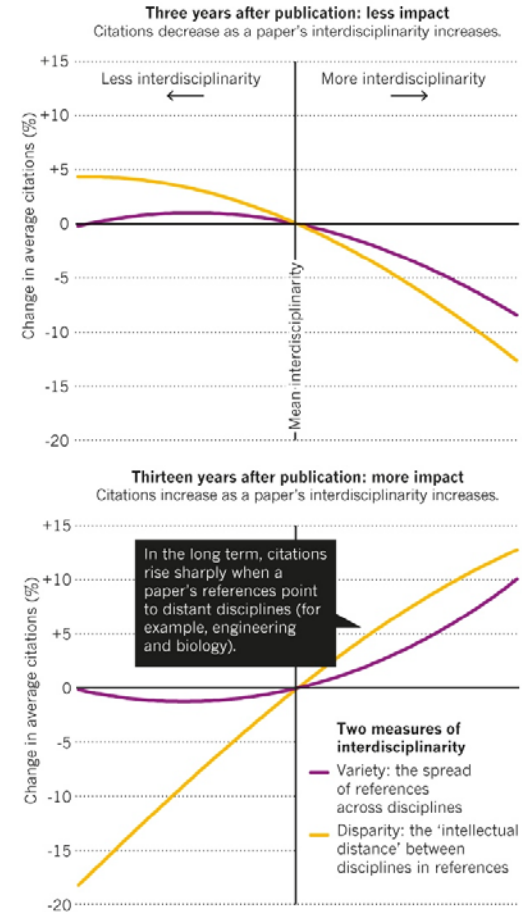
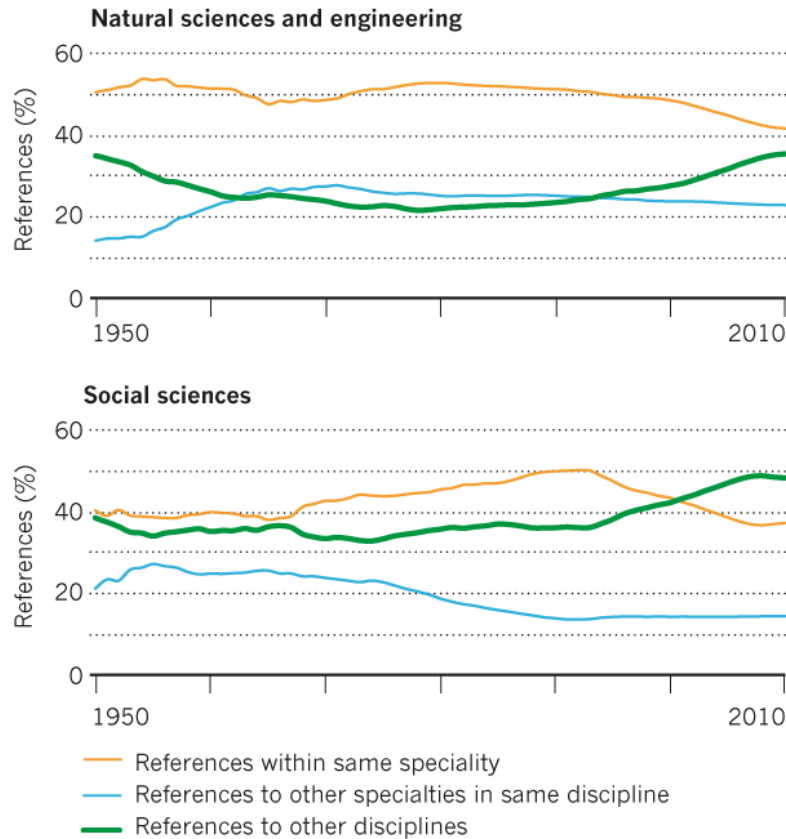


- Embed all the essential research best practices onto a **single authoring platform**
- Encourage **the usage of peer-reviewed articles** from both Open Access and non-Open Access
- From plagiarism check to originality check for better ideas: **knowledge iteration**

Research 1-2-3



Level of interdisciplinarity



Source: V. Larivière & Y. Gingras in *Beyond Bibliometrics* (eds B. Cronin & C. R. Sugimoto) 187–200 (MIT Press, 2014)

Source: J. Wang et al. *PLoS ONE* 10, e0127298 (2015)

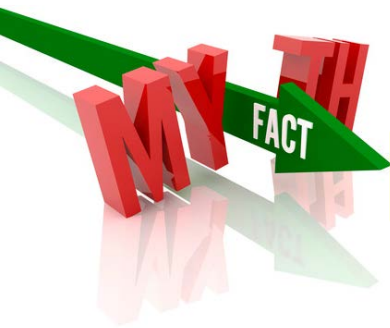
Publishing strategy

Publishing strategy is about asking the right questions, even before beginning to write:

1. **Purpose:** What is the purpose? Completely new work? Incrementally new? Extended work? Validation?
2. **Authorship:** Who are the authors?
3. **Choosing the right journal:** Who are the targeted audience?

“Is it true that if we published in a high impact factor journal, we are more likely to get cited?”

4. **Sequencing:** How to test the waters?



Open access

Open access was defined by the **Budapest Open Access Initiative (BOAI)** 2001 as follows:

*“By ‘open access’ to this literature, we mean **its free availability on the public internet**, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or **use them for any other lawful purpose**, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and **the right to be properly acknowledged and cited.**”*



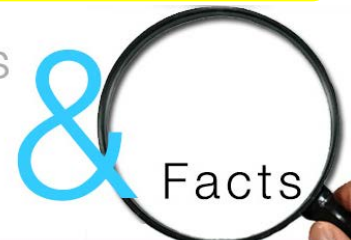
Green Open Access (or self-archiving) – Around the time of publication, the author deposits a pre-print, or the actual published article, in an institutional repository for *gratis* use by anyone.



Gold Open Access – The author or author’s institution pay a fee to the publisher when their paper is accepted for publication. The publisher thereafter makes the material available free at the point of access (through a Gold OA journal).

“Does open access publishing increase citations?”

Myths



Facts

Rules of thumb of writing the manuscript

1. Understand the editorial criteria:

- The peer review process; and
- The format (title, abstract, introduction, materials & methods, results, discussion & assumption, figures/graphs, tables and references)

2. Highlight the importance of the work

3. Evidence-based studies (data and supporting literatures/books)

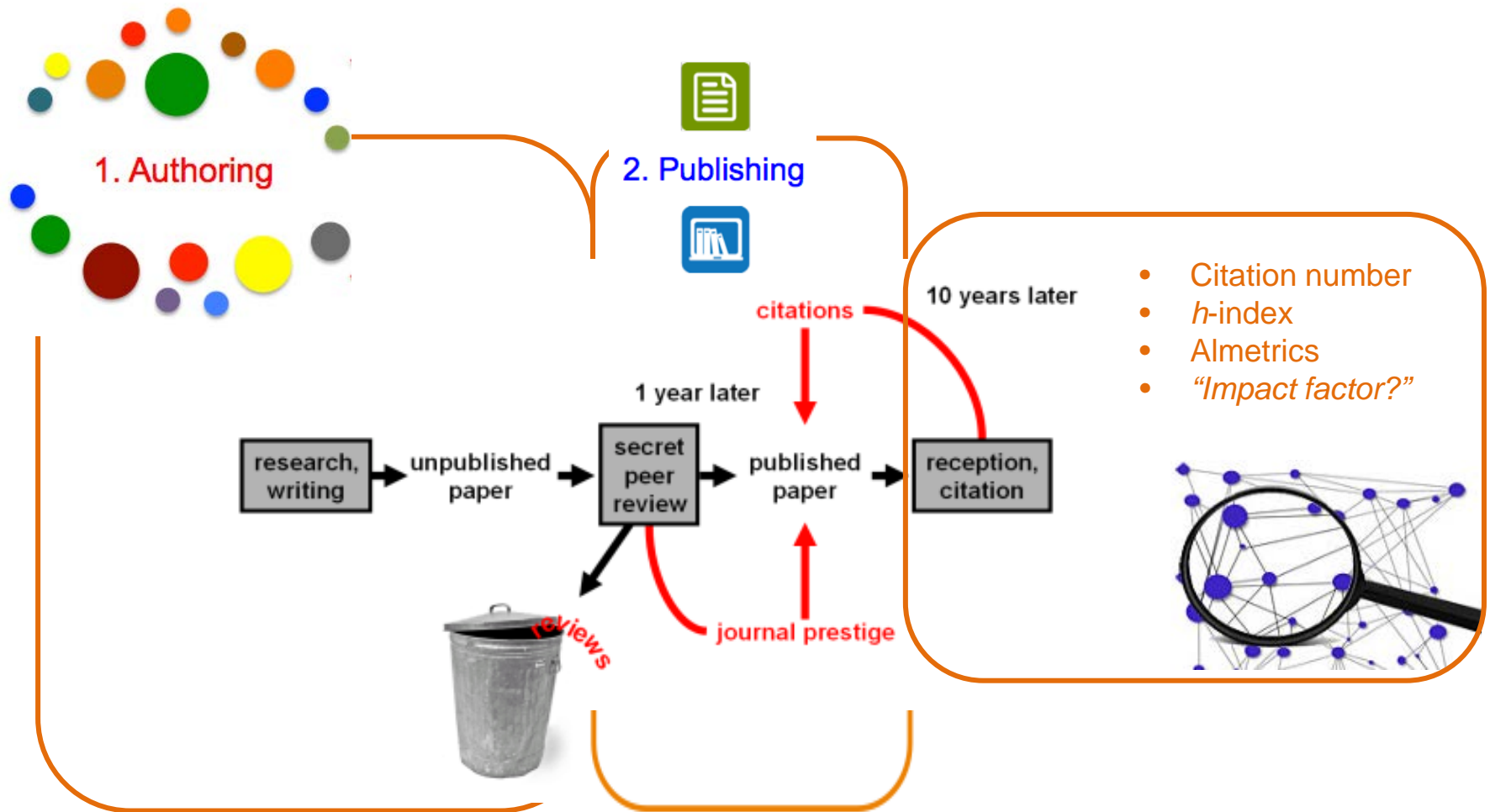
4. Be original; if not acknowledge the most original work

5. Manuscript must be clear, logical and easy to read. Be succinct!

KNOW THE RULES!



“Is the job over after the work being published?”



Research 1-2-3



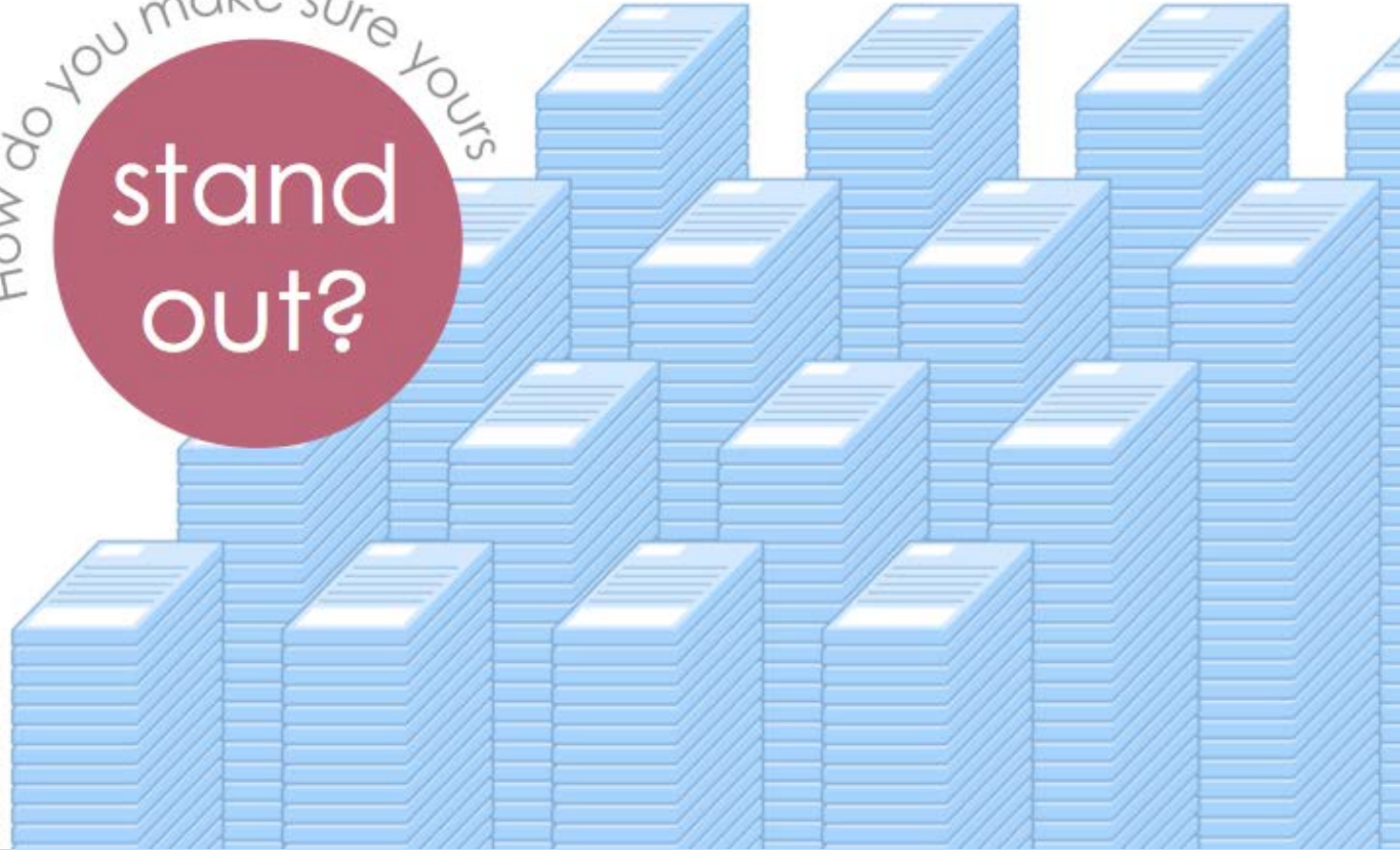
“How to promote your work?”

- Attend seminars or conferences
- Seeking for collaboration with other researchers
- Use of technology e.g. social media and

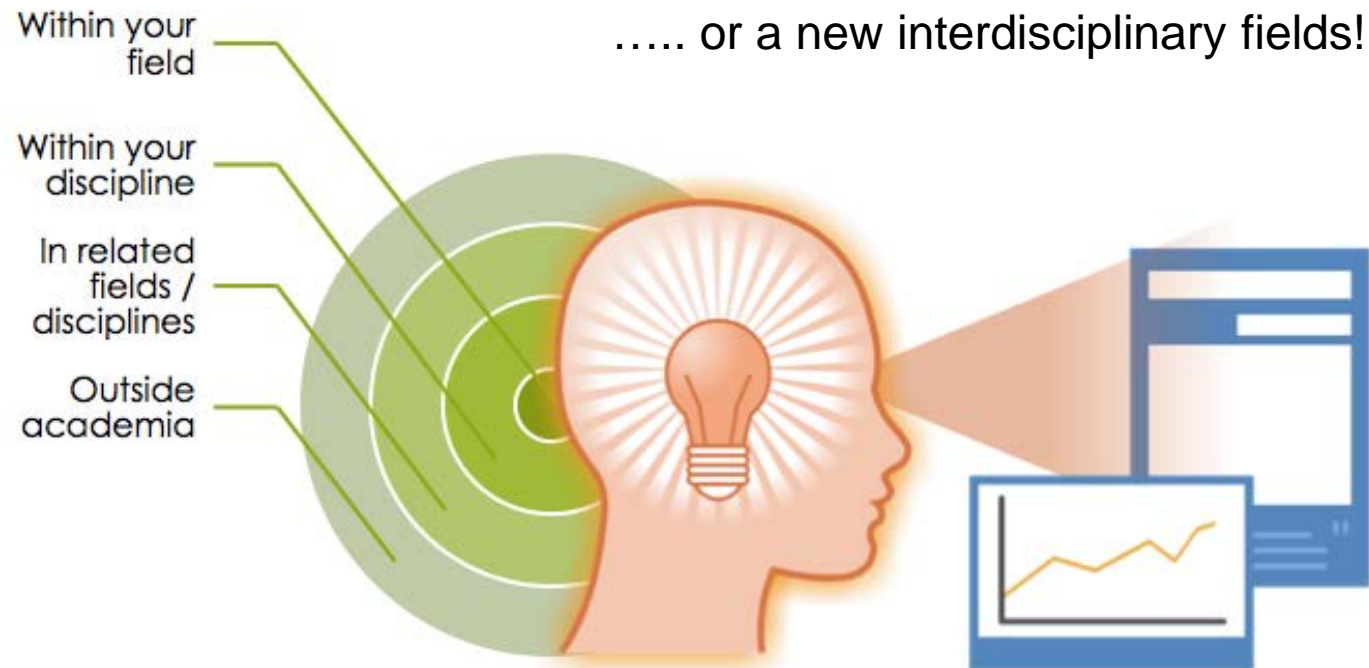


“Each year, 1 million+ research publications...”

How do you make sure yours
**stand
out?**



“...within and beyond the field!”



“And what are the metrics to check...”





<https://www.growkudos.com> ➡ Explain ➡ Enrich ➡ Share ➡ Measure

“More people read it, more likely to be cited.”

19% higher
article usage per day

for articles shared using the Kudos tools
compared to the control group

overall story

etc)

KUDOS 
Greater Research Impact

“More importantly, it’s supported by publishers!”

KUDOS 
Greater Research Impact

 **Thieme**

WILEY

 **Royal Society Publishing**


ELSEVIER


Emerald


**EUROPEAN
SOCIETY OF
CARDIOLOGY®**

HealthAffairs


**ROYAL SOCIETY
OF CHEMISTRY**

 **EDINBURGH
University Press**

 **Bone & Joint**

 **eLIFE**

 **POLICY PRESS**
at the University of Bristol

 **LIVERPOOL
UNIVERSITY PRESS**

Dovepress
open access to scientific and medical research

IOP Publishing

 **bioscientifica**

 **Journals.ASM.org**

 **Maney Publishing**
Research • Knowledge • Innovation

 **cogent** oa

 **CAMBRIDGE
UNIVERSITY PRESS**

 **Taylor & Francis Group**
an **informa** business

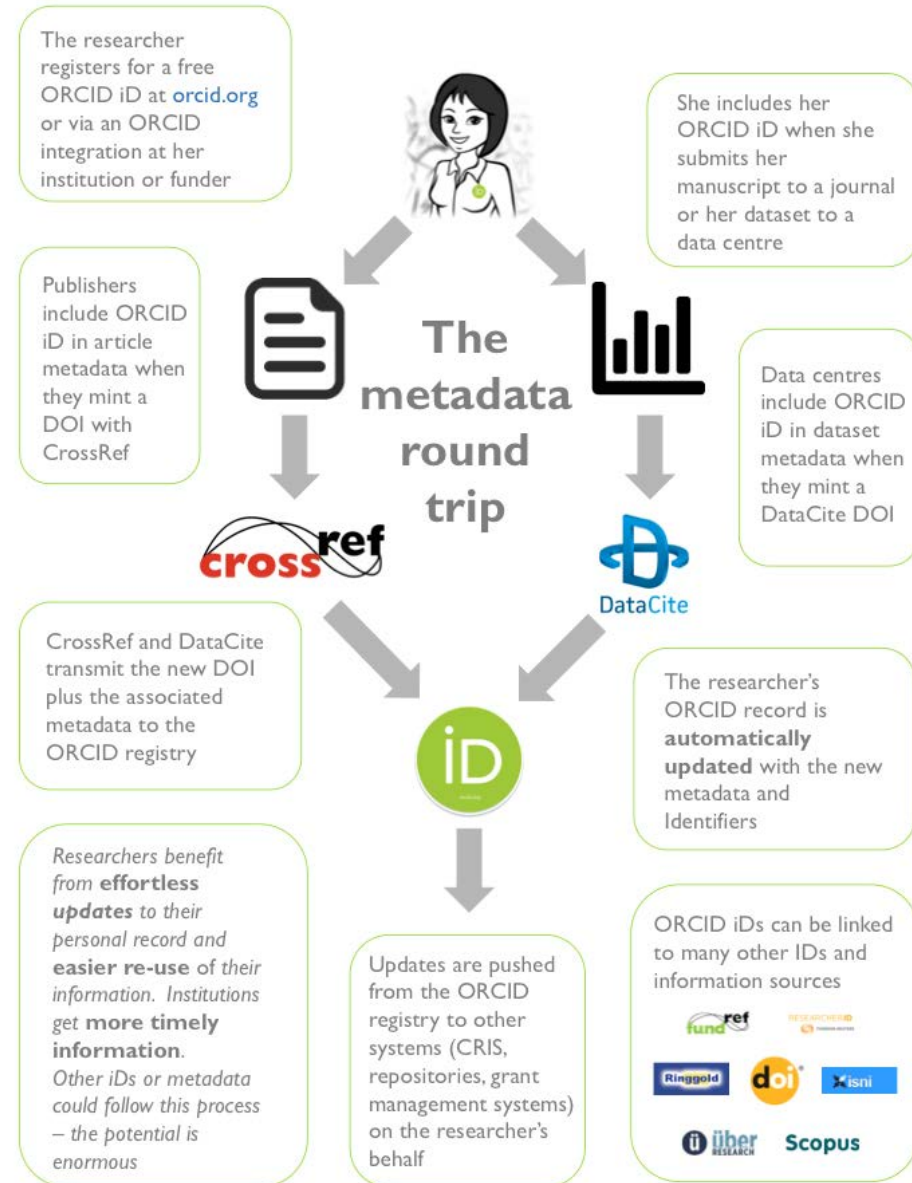
 **IUCr Journals**

 **OECD**
BETTER POLICIES FOR BETTER LIVES

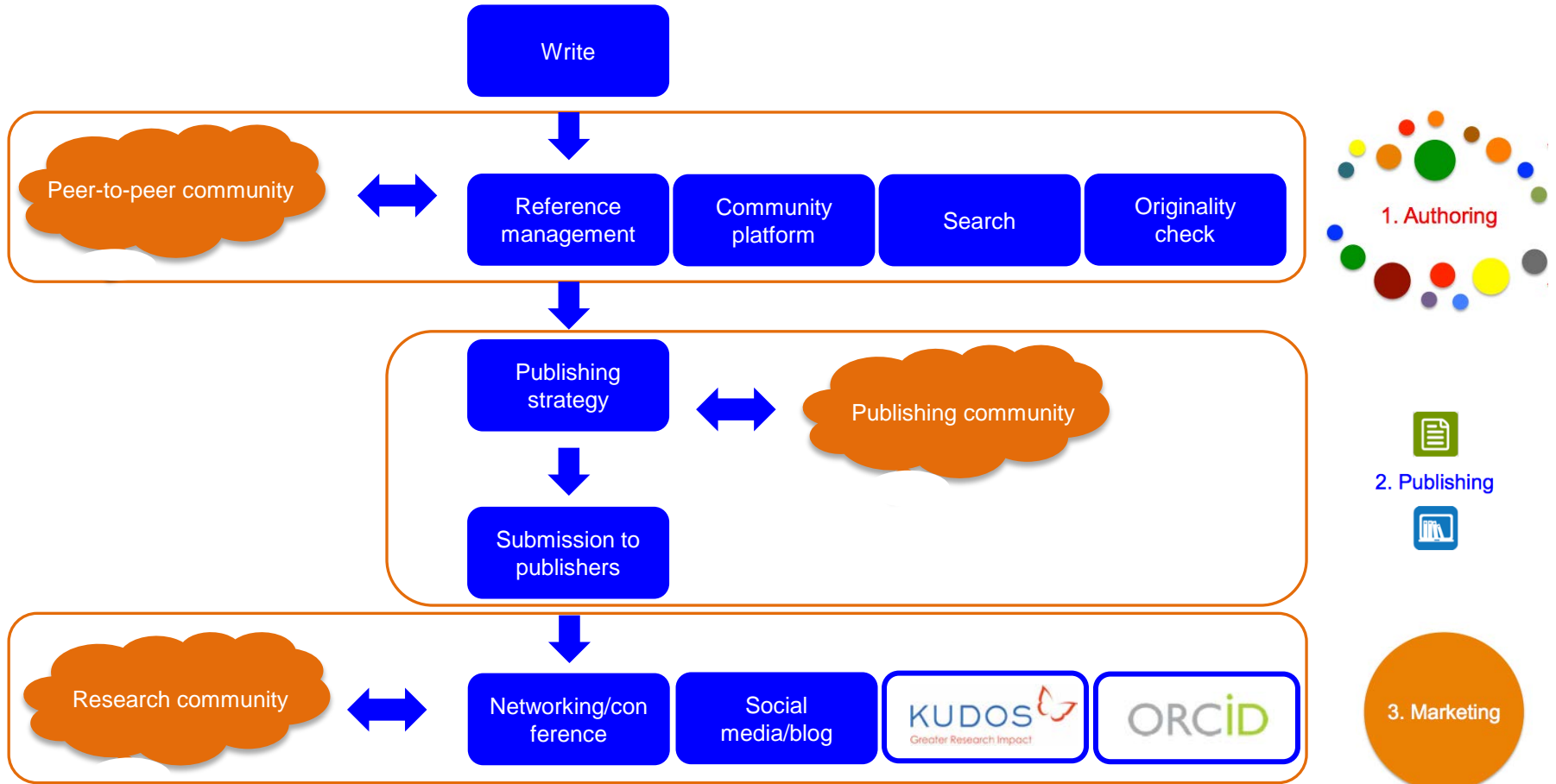


<http://orcid.org> ➡ Register ➡ Add your info ➡ Use your ORCID ID

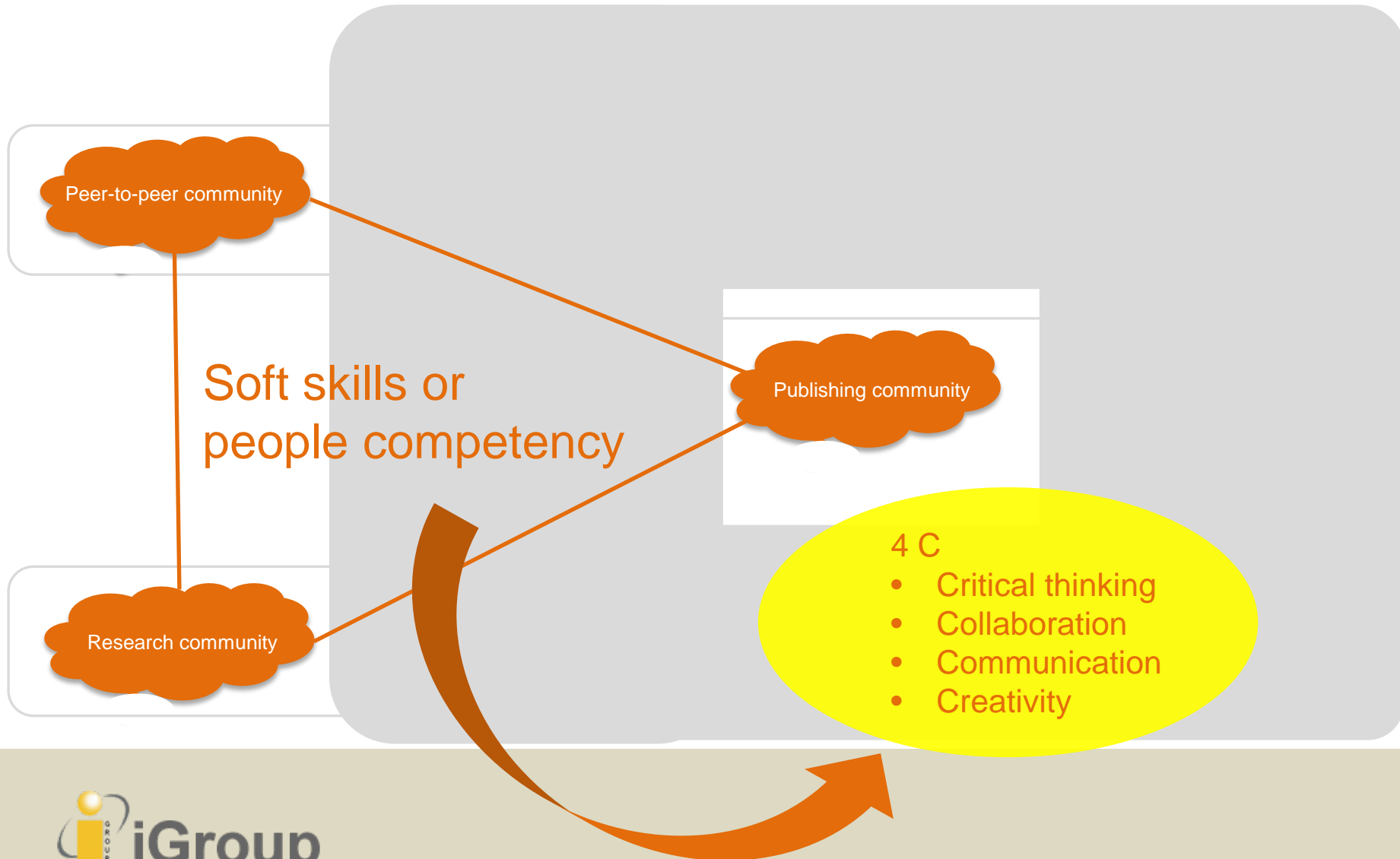
Capture, embed and interoperate



The research workflow

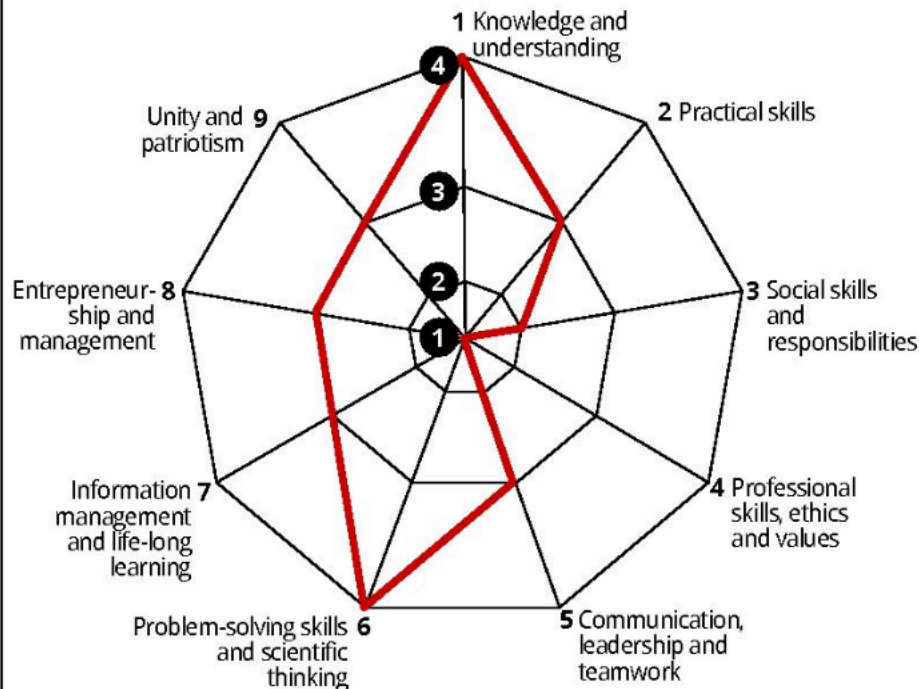


The research workflow



Holistic evaluation system

Besides the typical "report card" which lists subjects taken and grades obtained, the integrated cumulative grade point average (iCGPA) also has a "spider web" matrix that displays the CGPAs obtained for specific skill sets.



Performance guide

3.50-4.00 Very competent in 8-9 attributes
3.00-3.49 Competent in 7-9 attributes
2.00-2.99 Competent in 5-9 attributes

iCGPA: 3.34

Source: Higher Education Ministry

Education [Home > News > Education](#)

Published: Sunday August 16, 2015 MYT 12:00:00 AM

Updated: Sunday August 16, 2015 MYT 11:36:09 AM

Towards an integrated grading system

BY ANN-MARIE KHOR



Flying high: Public university students can now look forward to honing their employability through the iCGPA, which is under the blueprint's first shift of producing holistic, entrepreneurial and balanced graduates. —File photo



With the introduction of the integrated Cumulative Grade Point Average (iCGPA) pilot project, the nation can soon look forward to more holistic and readily employable graduates.

PICTURE this – university graduates who perform in their studies and outside the

Ernst and Young drops degree classification threshold for graduate recruitment

'No evidence' that success at university is linked to achievement in professional assessments, accountancy firm says

August 3 2015

BY CHRIS HAVERGAL
FOLLOW AUTHOR ON [CHAVEERGALTHE](#)



One of the UK's biggest graduate recruiters is to remove degree classification from the entry criteria for its hiring programmes, having found "no evidence" that success at university was correlated with achievement in professional qualifications.

Accountancy firm Ernst and Young, known as EY, will no longer require students to have a 2:1 degree and the equivalent of three B grades at A level to be considered for its graduate programmes.

Instead, the company will use numerical tests and online "strength" assessments to assess the potential of applicants.

Maggie Stilwell, EY's managing partner for talent, said the changes would "open up opportunities for talented individuals regardless of their background and provide greater access to the profession".

"Academic qualifications will still be taken into account and indeed remain an important consideration when assessing candidates as a whole, but will no longer act as a barrier to getting a foot in the door, she said. "Our own internal research of over 400 graduates



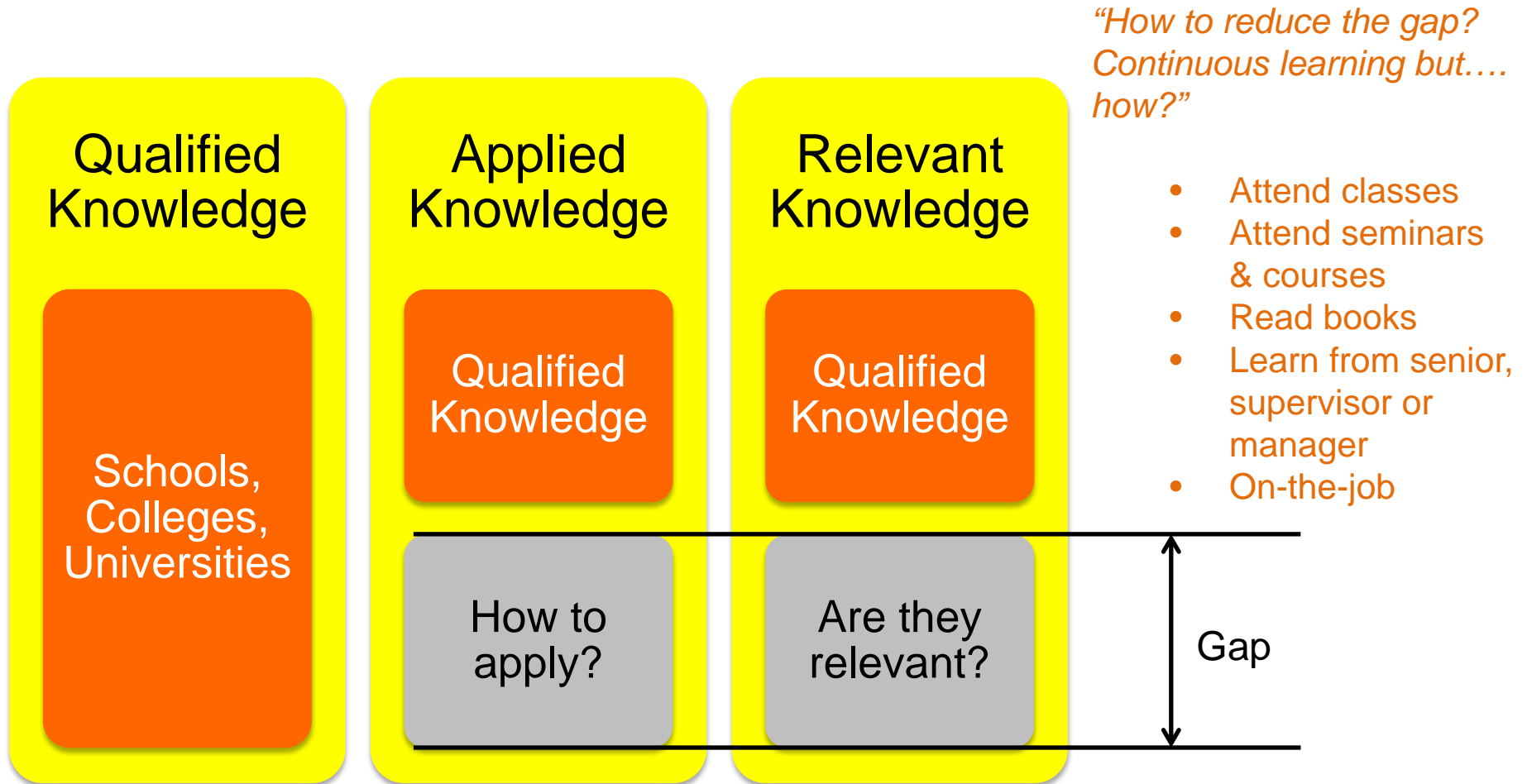
Table 3 : Perception of Junior Doctors on contributions of mentors to their learning and development

Contribution to learning and development	House Officers (n = 155)	
	Mean*	SD
Character building	4.10	.888
Clinical knowledge	4.05	.742
Critical thinking	4.04	.844
Clinical skills	4.01	.810
Doctor-patient relationship	4.00	.875
Personal insight	3.88	.878
Interpersonal / Communication skills	3.88	.855
Career development	3.80	.848
Networking	3.75	.956
Research interest	3.34	1.190
Research competency	3.26	1.185

*mean : on a scale of 1 (lowest) to 5 (highest)

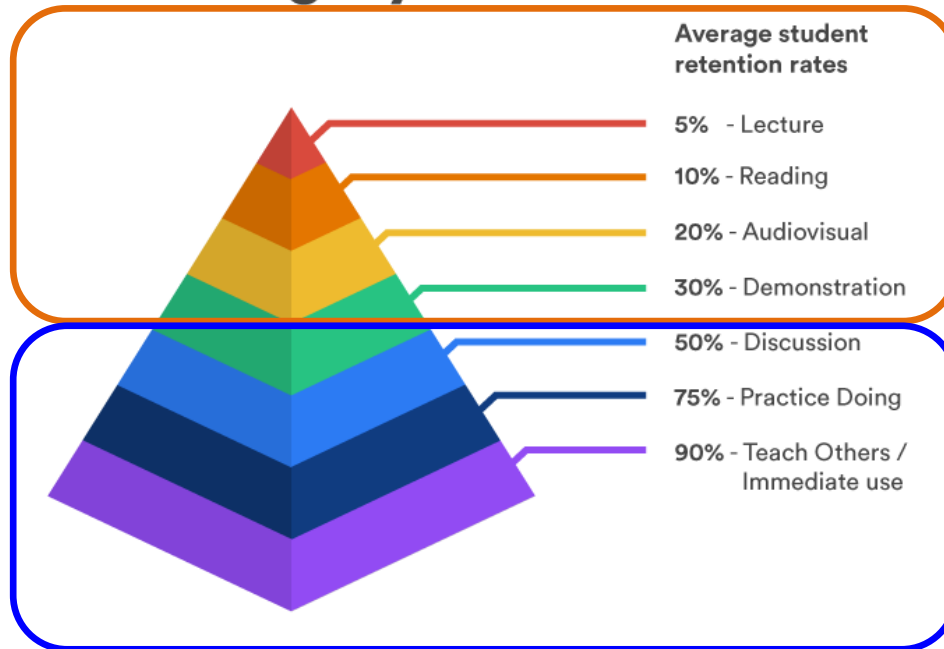


Competency gaps in traditional academia



Learning strategy: master of your own destiny

Learning Pyramid



Passive Learning

Short video/job aid
(a.k.a. *fast food*)

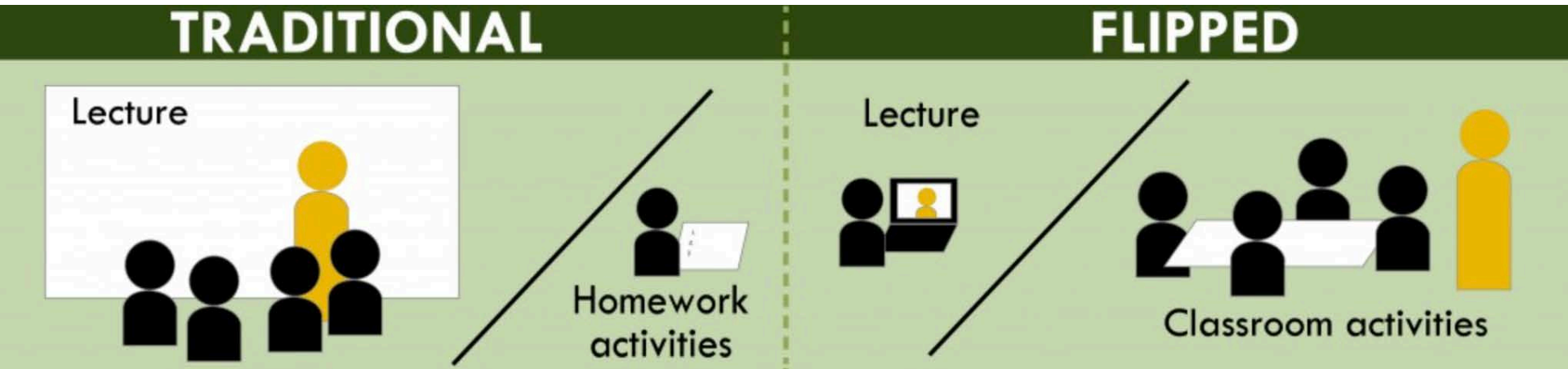
eLearning
(a.k.a. *cafeteria*)

Interactive Learning

Class-room & blended learning
(a.k.a. *sit down dining*)

Workshop & coaching
(a.k.a. *fine dining*)

Flipped classroom




The **flipped classroom** is a pedagogical model in which the typical lecture and homework elements of a course are reversed. Short video lectures are viewed by students at home before the class session, while in-class time is devoted to exercises, projects, or discussions.



Process-oriented guided inquiry learning (POGIL <https://pogil.org>)

In a POGIL classroom, students work in learning teams on guided inquiry exercises.

	Traditional Classroom	POGIL Classroom 
Prof's Job	Lecture	Help students learn
Source of Material	Professor	Specially designed "Learning Cycle" Activities
Student role	Passive listener	Active group discussion
Learning	Memorize notes after class	Discover concepts during class, reinforce after class
Emphasis	Competition	Community, Co-operation

70:20:10 rule of professional development

Research shows that people acquire new knowledge and/or skills through both formal education and training programs and informal learning situations. When you think back on the past twelve months what was the primary way in which you acquired the new knowledge and/or skills?

- 48%** Informal learning situations (either intentional or accidental) comprising interactions with peers or management or subject matter experts or observations and/or personal investigation into the subject such as reading or free webinars or attending conferences.
- 29%** Learning by performing the knowledge or skills or attitudes and/or behaviors in on-the-job situations with real performance consequences where the output of the activity is measurable and is conducted in business environments.
- 23%** Formal education programs and/or systems where learning objectives have been established and published and in which knowledge or skill is acquired in activities or exercises.

Source: The eLearning Guild Research, "Current trends in eLearning Research Report", Joe Pulichino, March 2005



On-the-job
experience



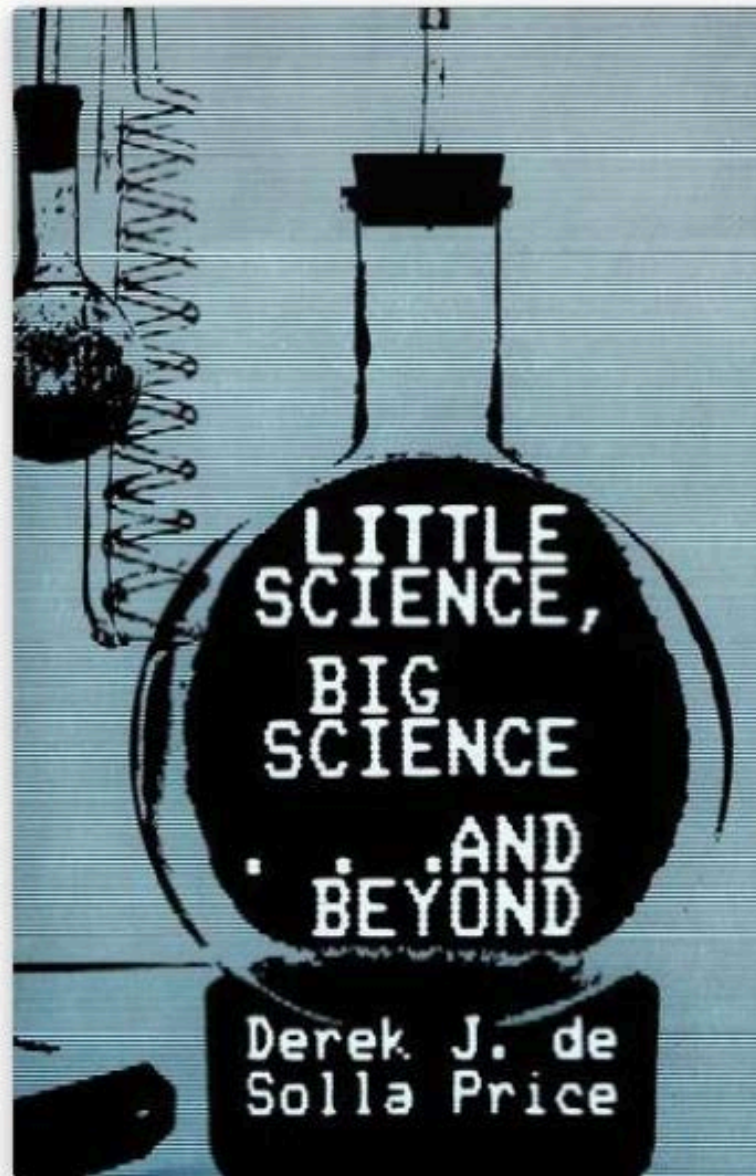
20%
Informal
Learning



10%
Formal
Learning

Source: Charles Jennings, former CLO of Reuters







1. Write your work right from the beginning of the project
2. Spend enough time on literature review. Average of 100 or more papers and books per year
3. Be selective on what to read: use citation indexed search and originality check
4. Acknowledge the original work of others
5. Have a publishing strategy: the targeted journals/proceedings, the sequencing and the quality of your manuscript
6. Always think about how to promote your published work by relating to the real world
7. 4C (critical thinking, collaboration, communication, creativity)



Thank **YOU**

woeifuh@igroupnet.com