

打造頂尖夢幻團隊

Building the Iron Triangle: Connecting Libraries, R&D and Faculty

CONCERT 2016年國際學術研討會

WILEY



In today's knowledge-based economy, scientific and technological innovation has become a key driver of economic growth and national progress. Taiwan's Ministry of Science and Technology (MOST) is trying very hard to facilitate stronger links between academic research and industrial development. At the same time, MOST will foster commercializing innovative science and technology research products, bringing them another step closer to meeting industrial needs. By fostering an innovative and entrepreneurial spirit and encouraging creativity in science and technology, MOST will boost Taiwan's academic and industrial competitiveness at the international level.

Minister Liang-Gee Chen 科技部 陳部長良基

議題三

育才競才與多元進路

國際頂尖人才延攬
留用

活絡多元出路重振
高階科研人才培育

加強產業科技實務
人才培訓機制

培育數位經濟跨域
人才

議題四

強化科研創新生態體系

加強產學研合作鏈
結

鼓勵原創科技研發
· 改革學術研發成
果評鑑制度

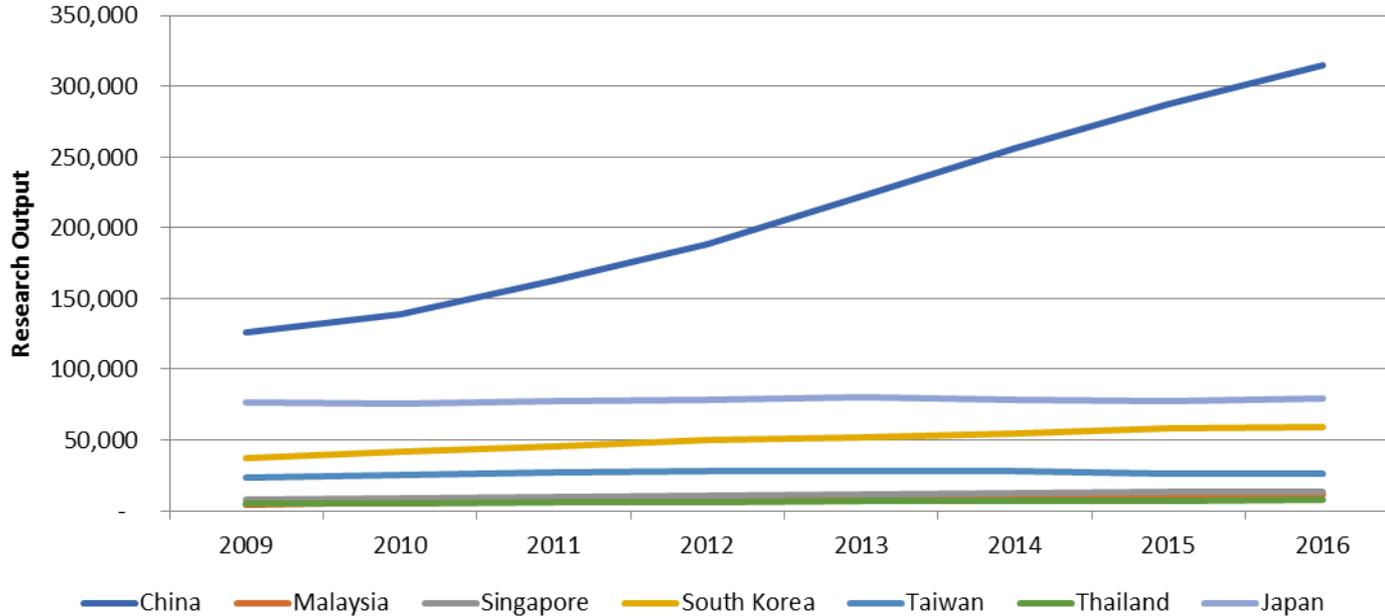
完備促進科技創新
發展的法制環境

強化科技決策支援
系統

<https://www.most.gov.tw/tc/10th/contents59d5.html?SiteID=653621452540257216&MmmID=655403164003701036>

Growth in Published Research Outputs by Country 2009-2016

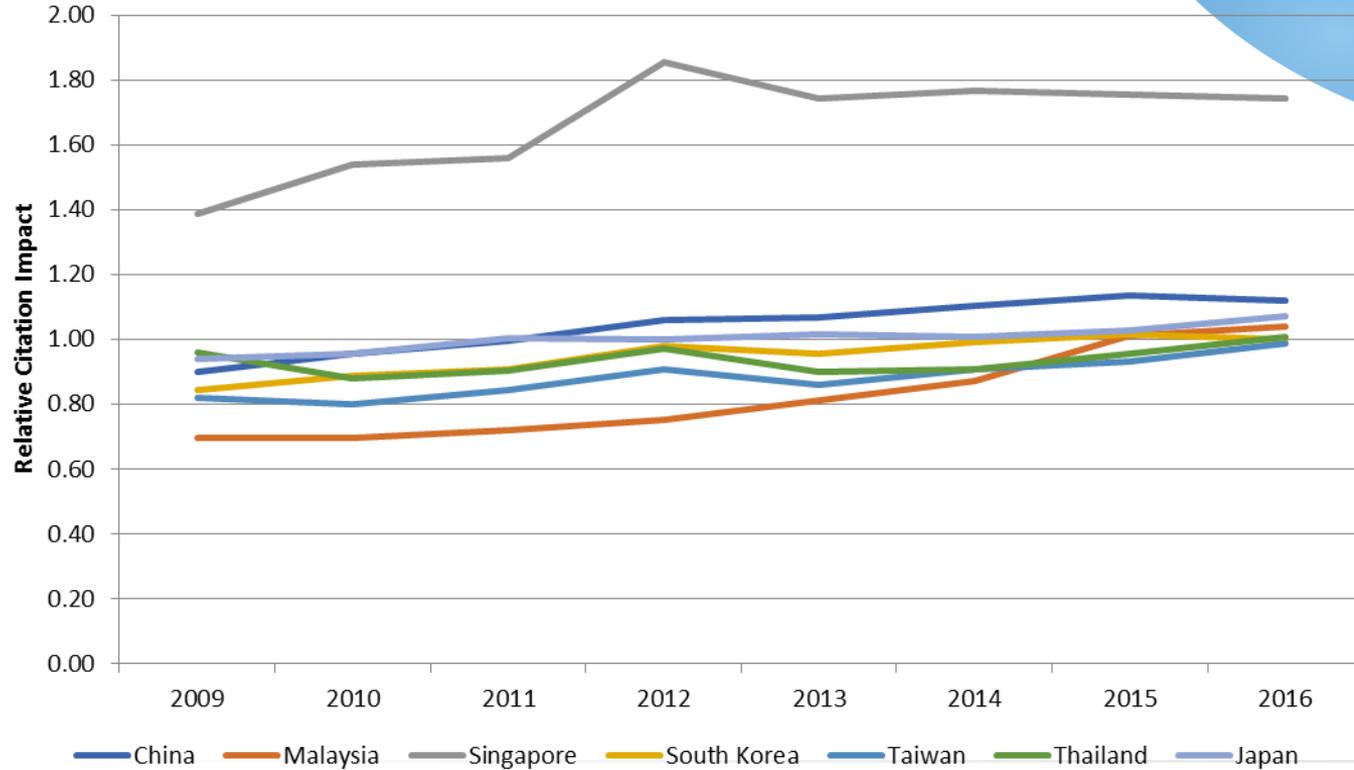
Source: Web of Science



Country	Growth Rate (CAGR)
China	14.0%
Malaysia	14.9%
Singapore	7.5%
South Korea	6.7%
Taiwan	1.5%
Thailand	7.4%
Japan	0.5%
World Totals	4.1%

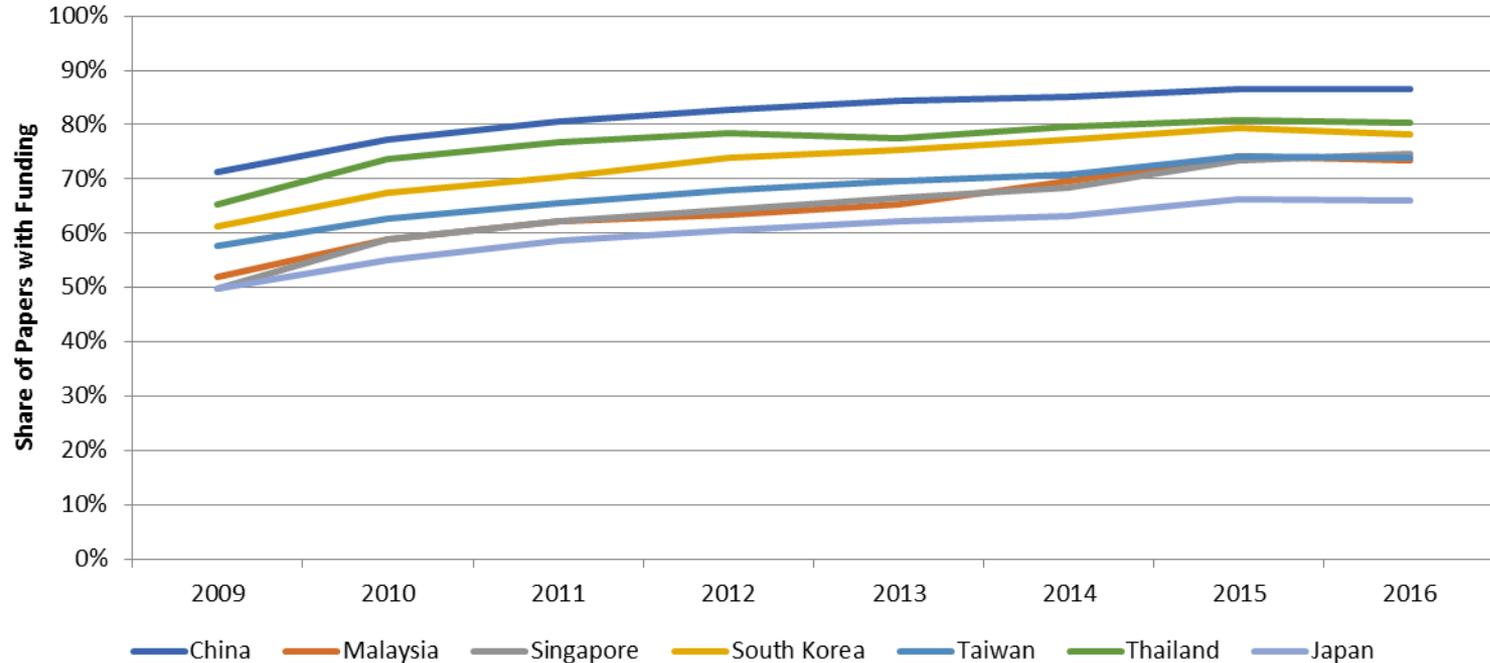
Relative Citation Impact 2009-2016

Source: Web of Science



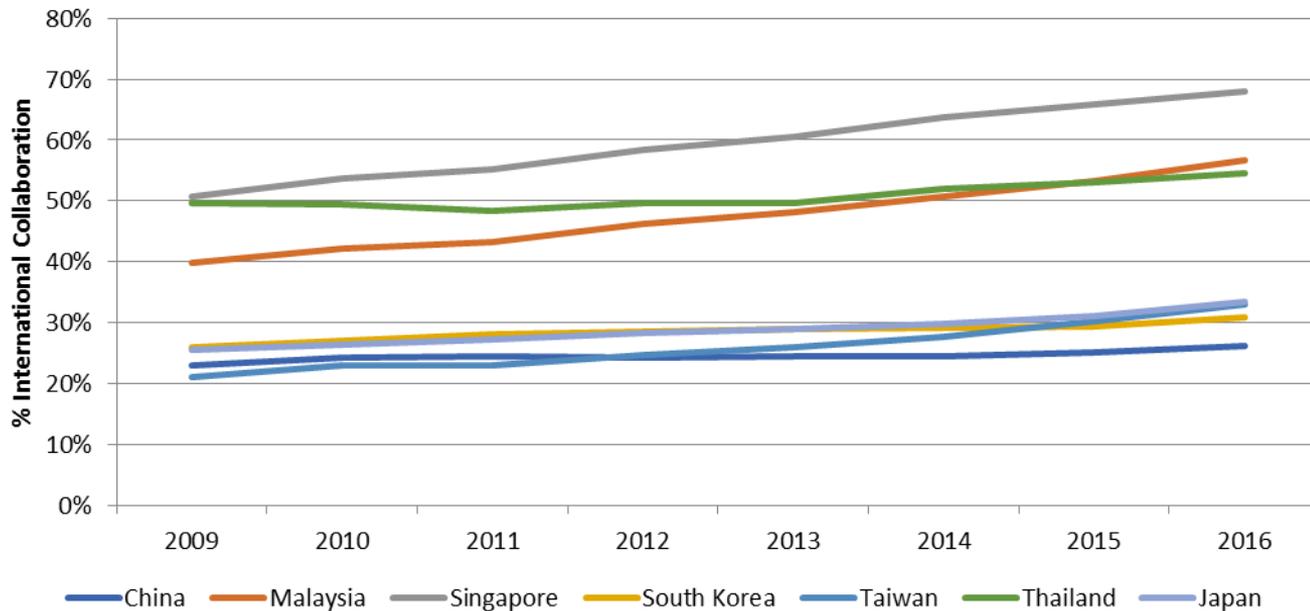
Research Funding Trends 2009-2016

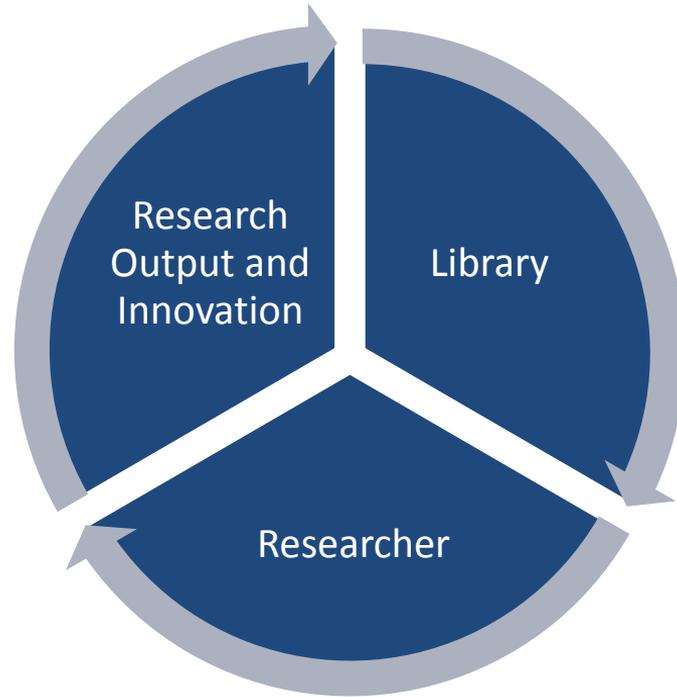
Source: Web of Science



International Collaboration Trends 2009-2016

Source: Web of Science

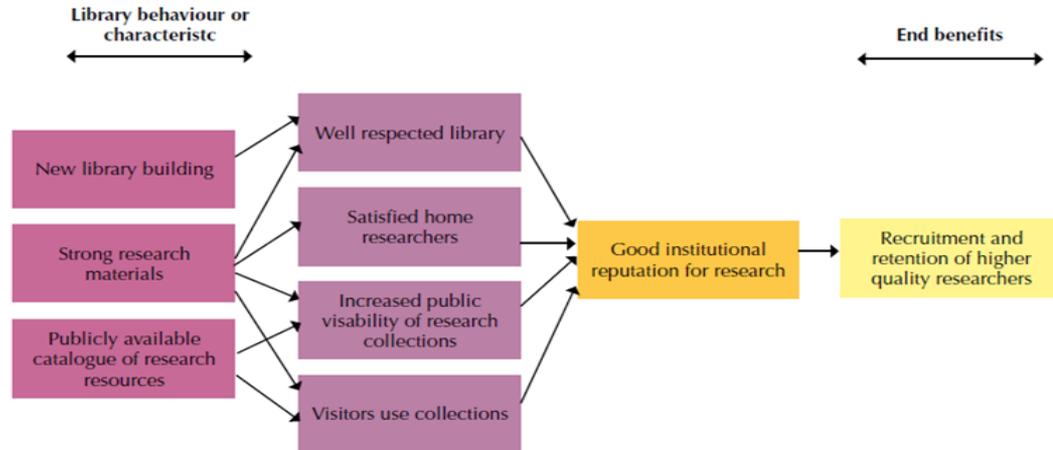




Libraries can help attract and retain top researchers

Successful and high-quality libraries can be a significant factor in recruiting and retaining top researchers

Benefits map



Quality Matters

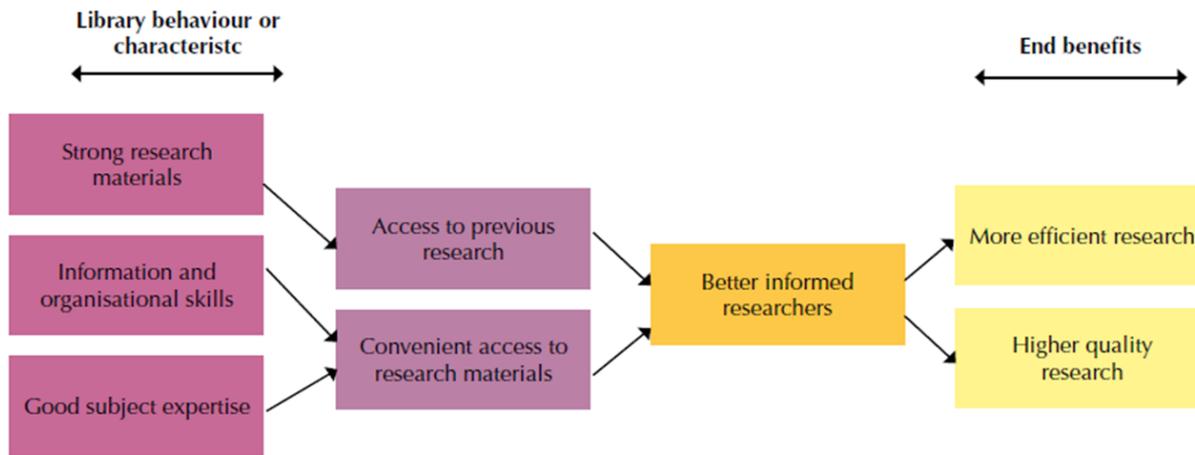


The library's research collections can be a distinctive feature of an institution, **boosting its 'brand'**. The quality, nature and comprehensiveness of the library's collections can be a **key selling point**, a major draw for international students, and an influence on researchers when choosing whether to apply for or accept a post.

Convenient access to high-quality research content remains a key foundation for good research

Access to high-quality content remains crucial to research, and its value is recognised by researchers, senior managers and librarians alike.

Benefits map



Super-Users = Super-Producers

CIBER Institutional Indicators

	Moderate users (n=80)	High users (n=25)	Super users (n=10)
Research papers per academic	0.4	0.8	1.0
Research grants and contracts per academic (£000's)	12.7	29.0	39.7
PhD awards per 100 academics	9.1	17.5	17.4
Cost per download	£0.89	£0.74	£0.60

The evidence provided here suggests a **tentative link** between e-journal consumption and research outcomes.

More spending on e-journals mean more use and better research

Journal use and expenditure correlate with research outcomes:

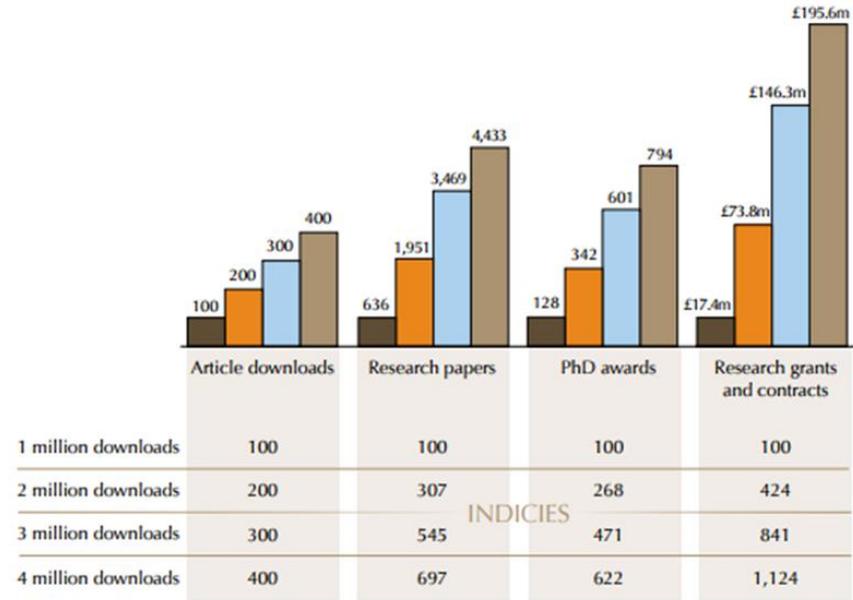
Per capita **expenditure** and use of e-journals is **strongly and positively correlated** with papers **published**, numbers of **PhD awards**, and research **grants** and contracts **income**.

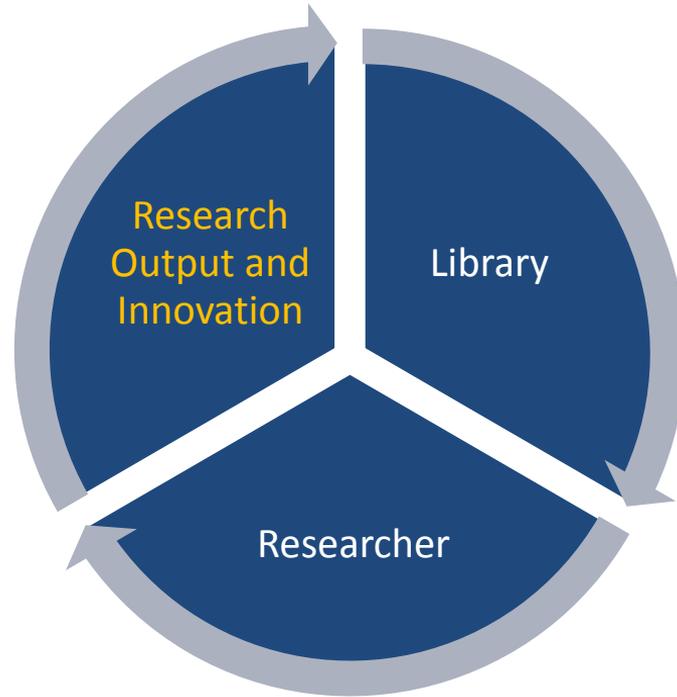
These correlations are independent of institutional size. Per capita use of e-journals is nearly three times as high in Russell Group universities as it is in the new universities, although there is no significant difference in cost per download.

Use and outcomes: Understanding the value of e- journals in terms of successful research

A **doubling** (100% increase) in downloads, from 1 to 2 million, is statistically associated with **dramatic - increases in research productivity**: papers up by 207%; PhD awards up 168%; and research grants and contract income up 324%.

The gearing becomes even stronger as the volume of downloads increases further.



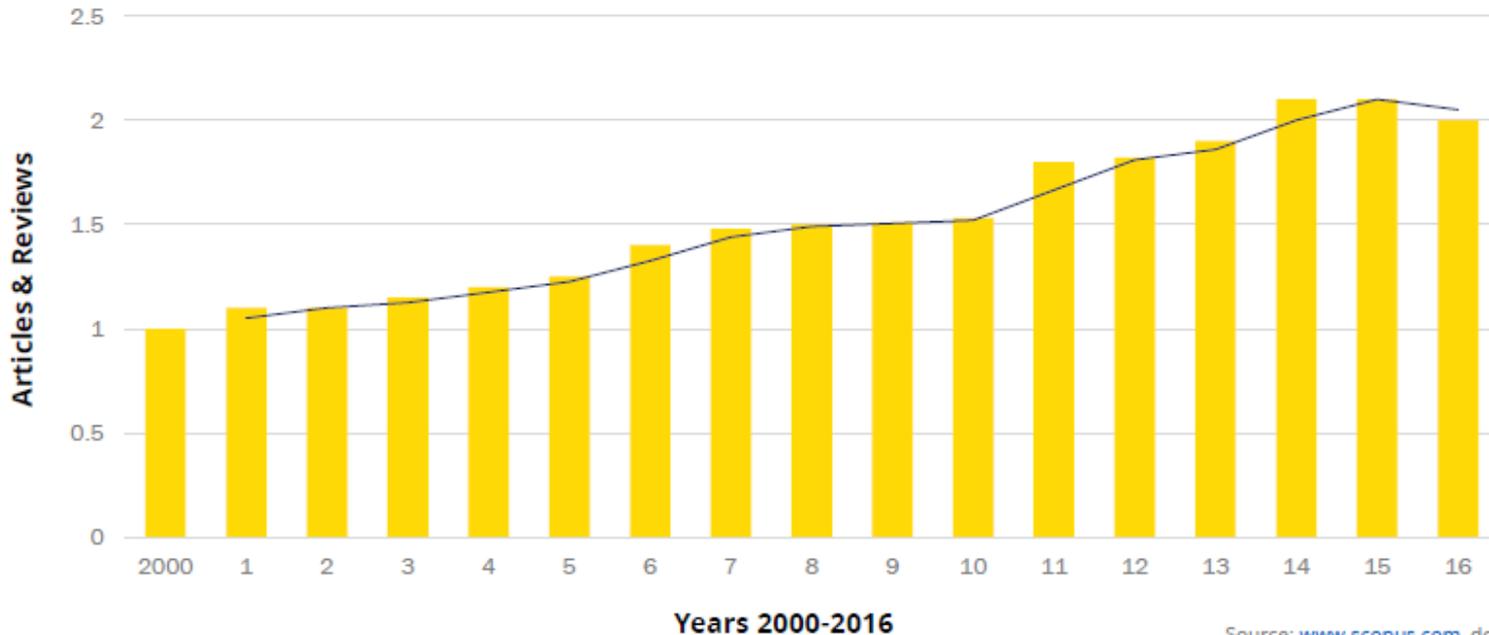


37%

of authors don't know how
to communicate their
results effectively

Tim Gillett – *Research Information*
Issue 87, December '16 - January '17

Dramatically Increasing Research Output



Source: www.scopus.com, downloaded 17th May 2017

"There are so many rules for different journals. It's not clear why my papers get rejected."

India

"I don't know how I find the right journal for my paper."

Philippines

"I find it challenging to write in English"

China

"The most challenging part is writing a good abstract and TOC"

India

"How do I write in the right way to catch the eye of a reviewer"

Philippines

"I'd like to know how to structure and present my findings so it's appealing to Editors."

India

Ambition to improve the quality and quantity of published research outputs meets with real challenges in some countries...



The volume of articles published in indexed journals is the primary performance indicator for a country's science programme, closely monitored at national and international level....

"The principal qualitative measure of knowledge production is the output of original articles published in scientific journals."

South Africa, *Towards a Knowledge-Based Economy: Ten-Year Innovation Plan for South Africa*

" La primera medición del desempeño global de las actividades científicas de un país se efectúa con los artículos publicados en medios reconocidos por su calidad.....La segunda medición se efectúa con las citas que reciben los trabajos de investigación..... "

Mexico, *PECITI 2014-2018*

"Estimates at country level suggest a positive relationship between measures of scientific research collaboration and citation impact. The relationship appears to be stronger in countries with lower levels of scientific production ...highlighting the importance of scale which smaller economies attempt to overcome by participating more intensively in global networks."

OECD, *Science, Technology, and Industry Scoreboard 2015*

Scientists with adequate skills to publish in international collaboration drive outputs and impact....

- High quality & comprehensive coverage
- Easy to scale to entire research community
- Easy to measure learning benefits & impact
- Expansive subject coverage, with instructional design

The screenshot shows the Wiley Researcher Academy website. At the top, there is a navigation bar with the 'WILEY' logo on the left and menu items 'home', 'all learning paths', 'my activity', and 'my profile' on the right. Below the navigation bar is a main content area. On the left, there is a text block titled 'WELCOME TO THE WILEY RESEARCHER ACADEMY' with a sub-header. The text below reads: 'Get started with all the resources you need to make you successful in publishing in high quality journals. The Wiley Researcher Academy equips you to meet all the challenges you will face before, during and after writing your research article.' To the right of this text is a photograph of two scientists in a lab. Below the text and image is a blue button labeled 'Start Learning Today' with a white right-pointing arrow icon. Underneath this is a filter bar with a dropdown menu set to 'All types' and a language selector set to 'EN'. At the bottom, there are two promotional tiles. The left tile is titled 'GET STARTED!' and contains the text 'Learn about the Wiley Researcher Academy in my country.' The right tile is titled 'MY ACTIVE LEARNING PATHS' and lists 'Peer review' and 'Open access to scientific literature' with right-pointing arrows.

WILEY

Welcome Vinay Singh

home all learning paths my activity my profile

WELCOME TO THE WILEY RESEARCHER ACADEMY

Get started with all the resources you need to make you successful in publishing in high quality journals. The Wiley Researcher Academy equips you to meet all the challenges you will face before, during and after writing your research article.

Start Learning Today

All types

EN

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MY ACTIVE LEARNING PATHS

- ▶ Peer review
- ▶ Open access to scientific literature



Prof Dr Jose Oliveira,
Editor-in-Chief, *Small*
(IF: 8.315)



Dr Jennifer Mahoney,
Editor-in-Chief *Journal*
of Polymer Science:
Polymer Physics
(IF: 3.830)



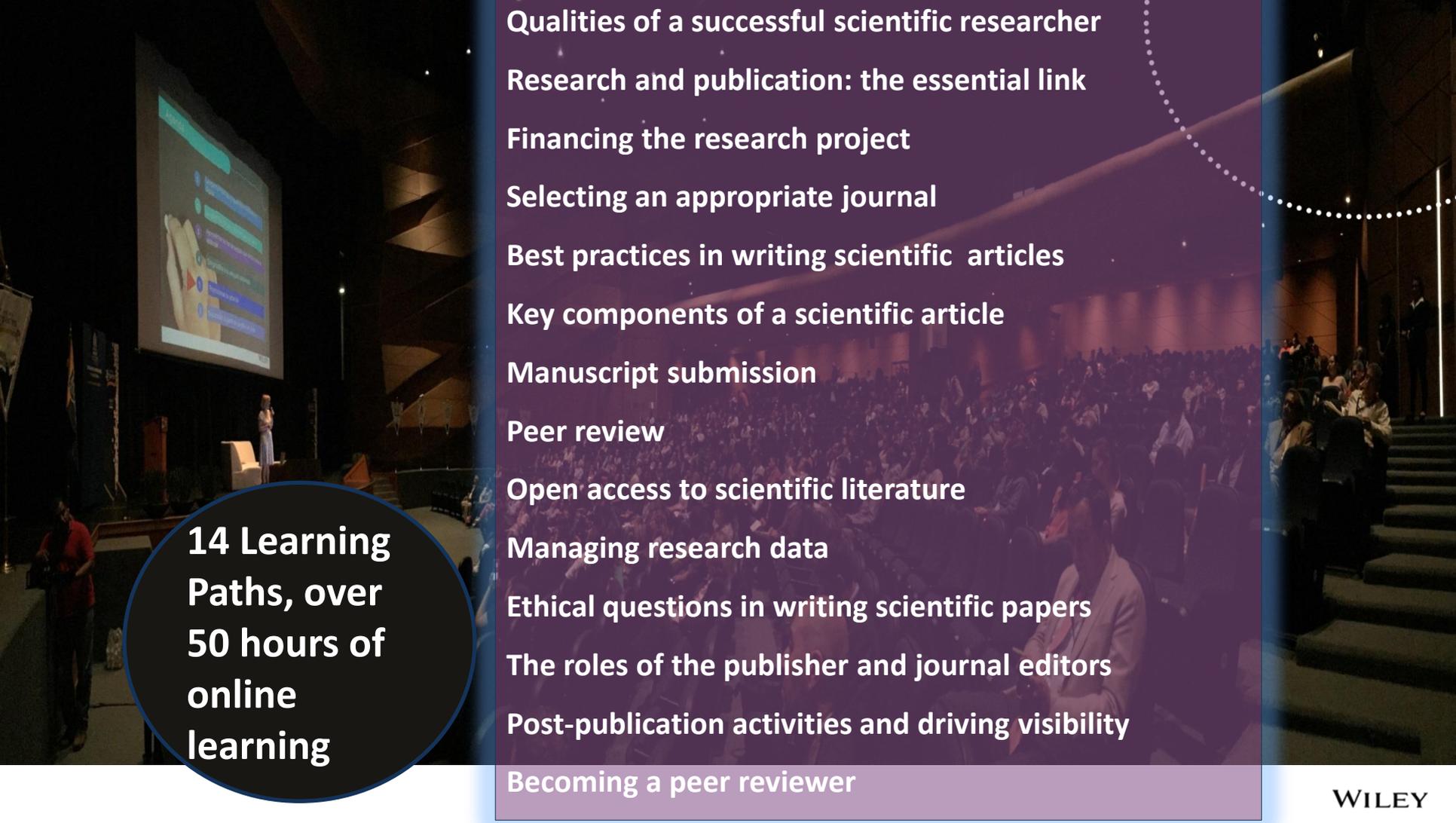
Dr Peter Hambleton,
Executive Editor, *Journal*
of Chemical Technology
& Biotechnology (IF:
2.349)



Dr Bernd Pulverer
Editor-in-Chief, *The*
EMBO Journal (IF:
9.6)



Dr Andrew Moore,
Editor-in-Chief,
Bioessays (IF: 4.72)



**14 Learning
Paths, over
50 hours of
online
learning**

Qualities of a successful scientific researcher

Research and publication: the essential link

Financing the research project

Selecting an appropriate journal

Best practices in writing scientific articles

Key components of a scientific article

Manuscript submission

Peer review

Open access to scientific literature

Managing research data

Ethical questions in writing scientific papers

The roles of the publisher and journal editors

Post-publication activities and driving visibility

Becoming a peer reviewer

Essential learning for
PhD students and Early-
Career Researchers,
excellent skills renewal
for Mid-Career
Researchers



**Self paced learning, anytime
anywhere access to enable the
greatest participation PhD
students, Early and Mid Career
Researchers**

PhD



Senior Research



Reader/PI



Professor



Qualities of a successful scientific researcher

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WILEY
Researcher Academy

Administrator Login

Home My Dashboards My Reports

Home-My Dashboards

- All current logins
- Current logins by institution
- All completed Learning Paths
- Completed Learning Paths by Institution**
- All completed programmes
- Completed programmes by institution
- Evaluation scores
- Evaluations scores by cohort
- Evaluation scores by institution

Selección de la revista... CONVETAV

Average result from step 1: **57%**

Average result from step 2: **82%**

Average time spent per learner active or having finished: **17 HOURS**

Cuestiones éticas... Colegio de Postgraduados

Percentage of active learners: **67%**

Number of views contents: **18 CONTENTS**

LEADER BOARD:
 > Marcel Duchamp
 > Celina Fernandez
 > Yannick Lemare

Average time spent per learner active or having finished: **14 HOURS**

454 POSTS | 886 LINES

- Dashboards and configurable, downloadable reports for
- Monitor usage , completion and learning benefits by institution, level of study, subject group etc.
- Monitor performance of individual courses and modules
- Monitor access levels, access patterns

"Getting educated and trained in the skills one needs in order to publish research results, hypotheses, and models has never been more important, in particular for young scientists, but also for the more established among us: **Wiley** has taken an important initiative in developing an on-line platform that provides that education and assesses participants' progress. There is no doubt it will help scientists increase the impact of their studies."

Professor Aaron Ciechanover
Nobel Prize, Chemistry 2004