What Scientists Really Need

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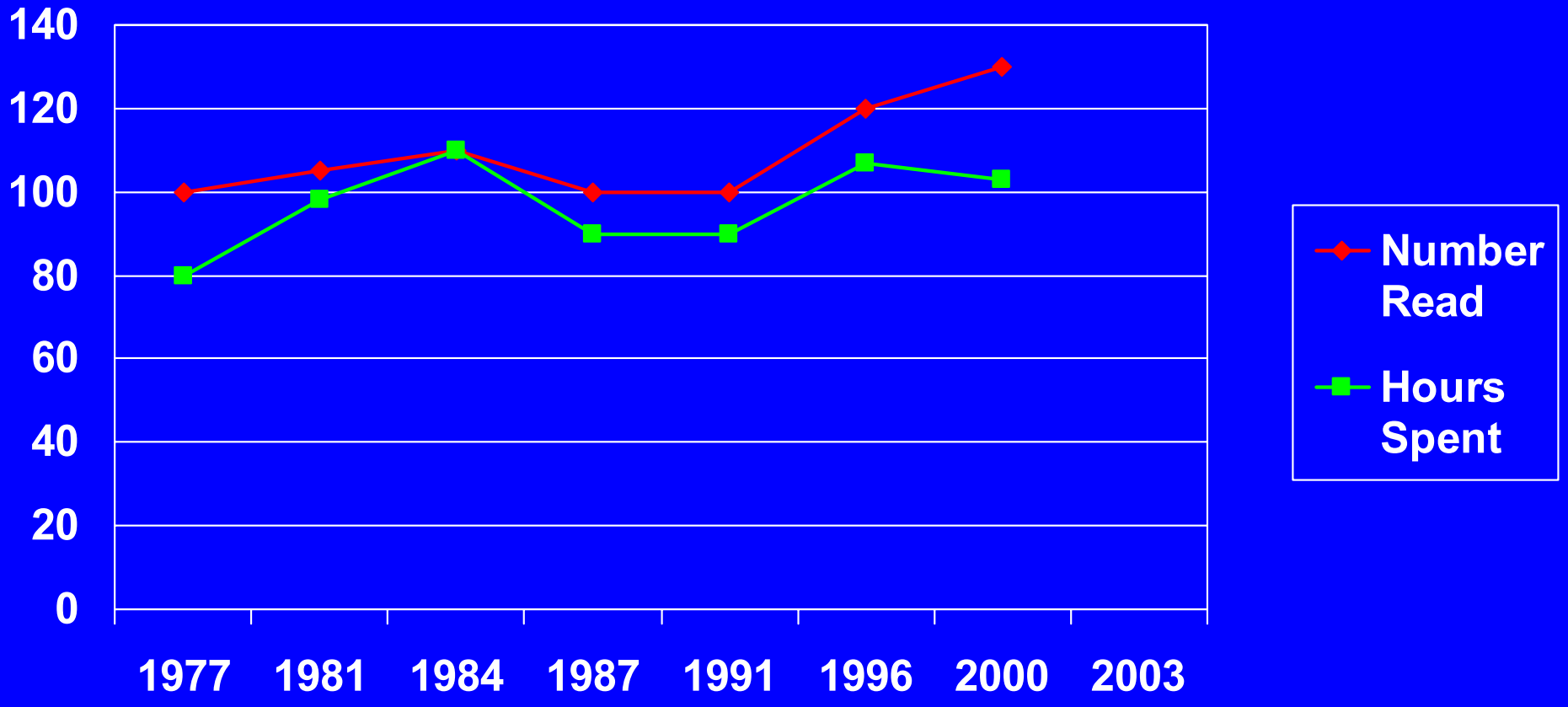
Scientists need to:

1. Read more in not much more time
2. Use many more ways to locate and read information
3. Make choices based on convenience

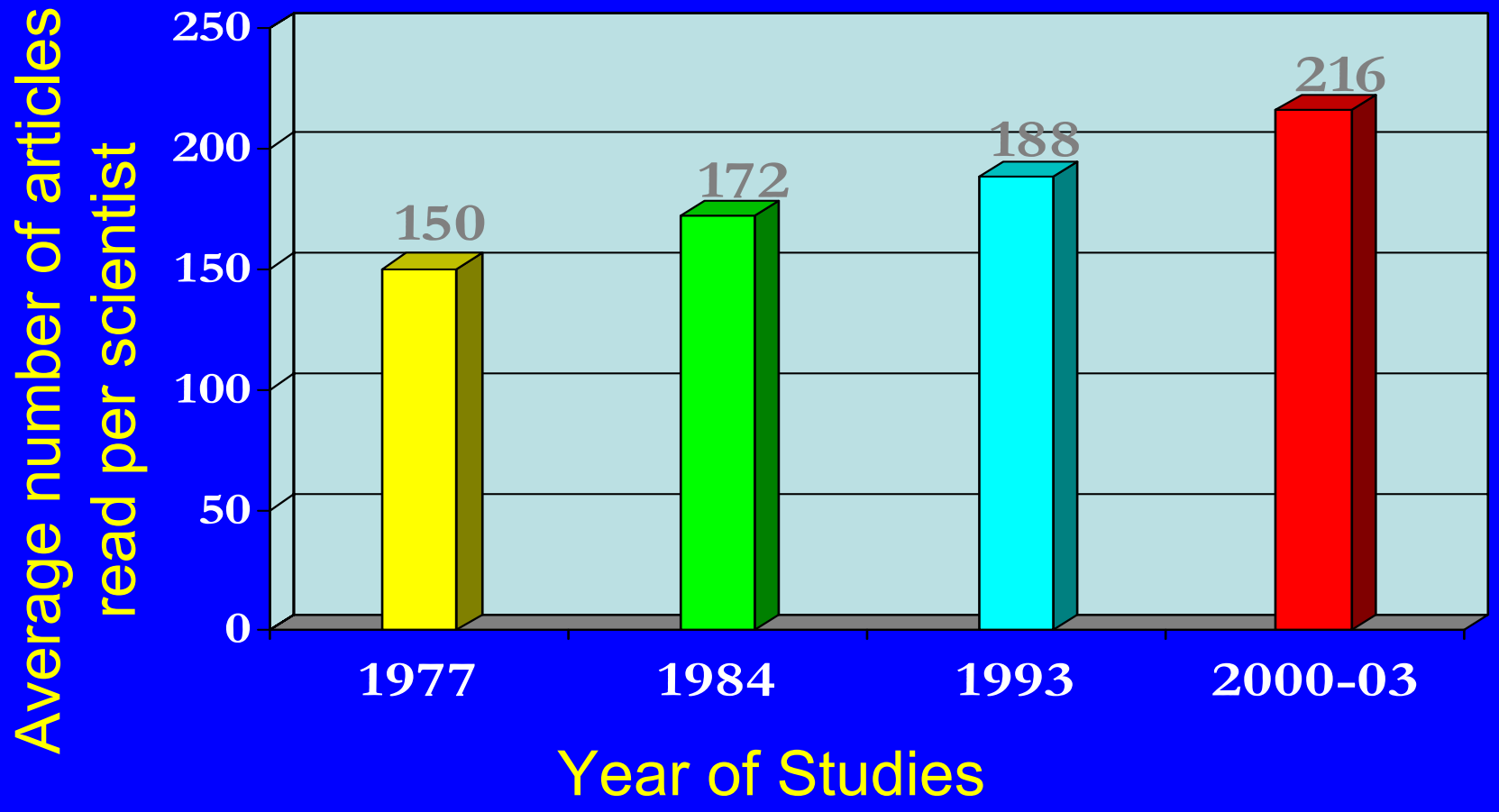
Tenopir & King Data From:

- 25,000+ scientists, engineers, physicians, and social scientists
- 1977 to the present
- University and non-university settings
- Recent surveys at U.S. and Australian universities, pediatricians, astronomers

Average Time Spent and Number of Articles Read Per Year Person



Ave. Articles Read per Univ. Scientist

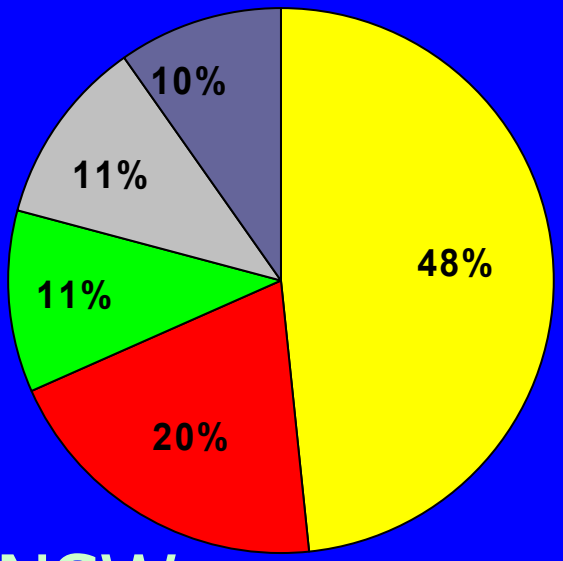


Reading Varies by Subject Discipline and Workplace

• Univ. medical	• ~322 articles/year
• Practicing Pediatricians	• ~180 articles/year
• Univ. Scientists	• ~216 articles/year
• All Scientists	• ~130 articles/year
• Soc Sci/Psych	• ~191 articles/year
• Engineers	• ~111 articles/year

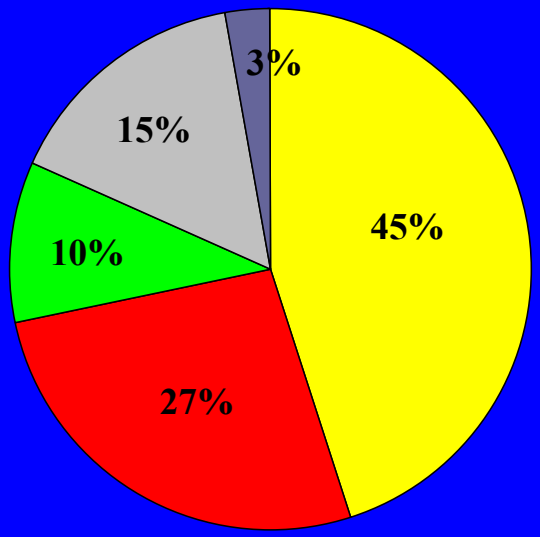
2. Scientists use many ways to locate and read information

Method of Article Discovery

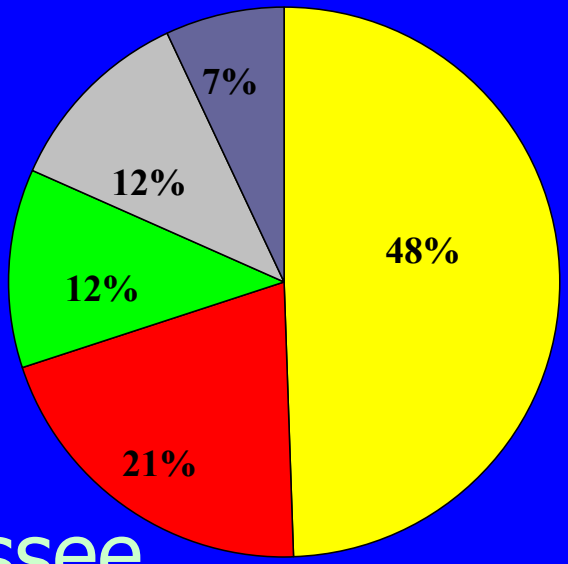


UNSW

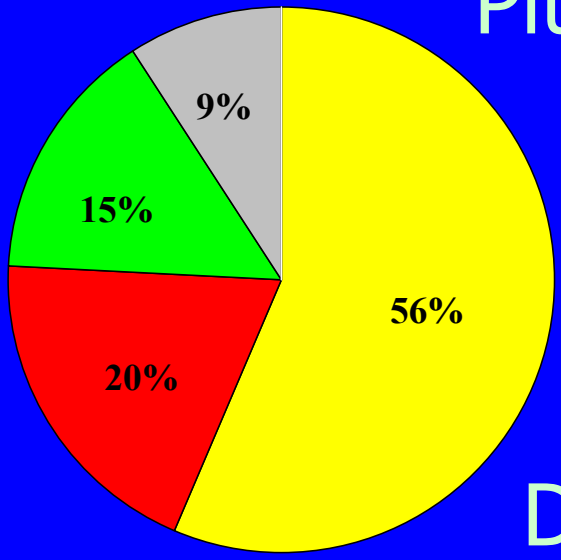
- Browsing
- Online Searching
- Cited in Other Pub.
- Another Person
- Other



Pittsburgh

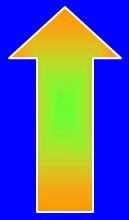


Tennessee

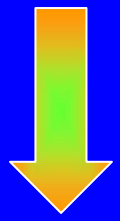


Drexel

How Scientists Learned About Articles



Online Searching by Topic



Browsing Complete Journals

Electronic versions provide additional functions (searching, citation linking) which replace some browsing

Browsing

- Core titles
- Current issues
- Background
- Current awareness

Searching

- New topics
- Old articles
- Primary research
- For writing

“Electronic” articles include:

Search | Back Issues | Author Index | Title Index | Mirrors

D-Lib® Magazine

Vol. 7 No. 5

EDITORIAL

Internet Privacy: An Oxymoron?
by Bonita Wilson

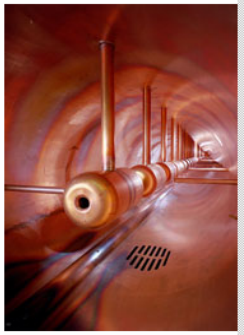
To the Editor: *Letters*

From Michael L. Nelson, *NASA Langley Research Center*

From Kenneth Frazier, *University of Wisconsin*

ARTICLES

Representing Value as Digital Objects: A Discussion of Transferability and Anonymity
Robert E. Kahn, Corporation for National Research



Photograph of the inside view of

Document Frame - Microsoft Internet Explorer provided by University of Tennessee, Knoxville

ProQuest

Searching collection: All Collections — Article Display

Email Article | Article 9 of 50 | Publisher Info. | Mark article | Article format: Page Image

Page Control

POLICY TRENDS

E-signatures battle ‘fear factor’

Culture of ‘ink’ slows adoption of digital John Hancocks at federal agencies

BY WILLIAM MATTHEWS

arXiv.org e-Print archive

Automated e-print archives physics Search Form Interface Catchup Help

13 Dec 2001: Cumulative “What’s New” pages. Note main site relocation.
Robots Beware: indiscriminate automated downloads from this site are *not* permitted.

Physics

- Astrophysics (**astro-ph** new, recent, abs, find)
- Condensed Matter (**cond-mat** new, recent, abs, find)
  includes: Disordered Systems and Neural Networks; Materials Science; Mesoscopic Systems and Quantum Hall Effect; Soft Condensed Matter; Statistical Mechanics; Strongly Correlated Electrons; Superconductivity
- General Relativity and Quantum Cosmology (**gr-qc** new, recent, abs, find)
- High Energy Physics - Experiment (**hep-ex** new, recent, abs, find)
- High Energy Physics - Lattice (**hep-lat** new, recent, abs, find)
- High Energy Physics - Phenomenology (**hep-ph** new, recent, abs, find)
- High Energy Physics - Theory (**hep-th** new, recent, abs, find)
- Mathematical Physics (**math-ph** new, recent, abs, find)
- Nuclear Experiment (**nucl-ex** new, recent, abs, find)
- Nuclear Theory (**nucl-th** new, recent, abs, find)
- Physics (**physics** new, recent, abs, find)
  includes (see detailed description): Accelerator Physics; Atmospheric and Oceanic Physics; Atomic Physics; Atomic and Molecular Clusters; Biological Physics; Chemical Physics; Classical Physics; Computational Physics; Data Analysis, Statistics and Probability; Fluid Dynamics; General Physics; Geophysics; History of Physics; Instrumentation and Detectors; Medical Physics; Optics; Physics Education; Physics and Society; Plasma Physics; Popular Physics; Space Physics
- Quantum Physics (**quant-ph** new, recent, abs, find)

Mathematics

MAIN INSTRUCTION BIO & VITA RESEARCH PUBLICATIONS

Dr. Carol Tenopir

Professor of Information Sciences

- Research on Electronic Journals
- NSF NSDL Research Project
- Selected E-Print Articles
- Biography and Vita

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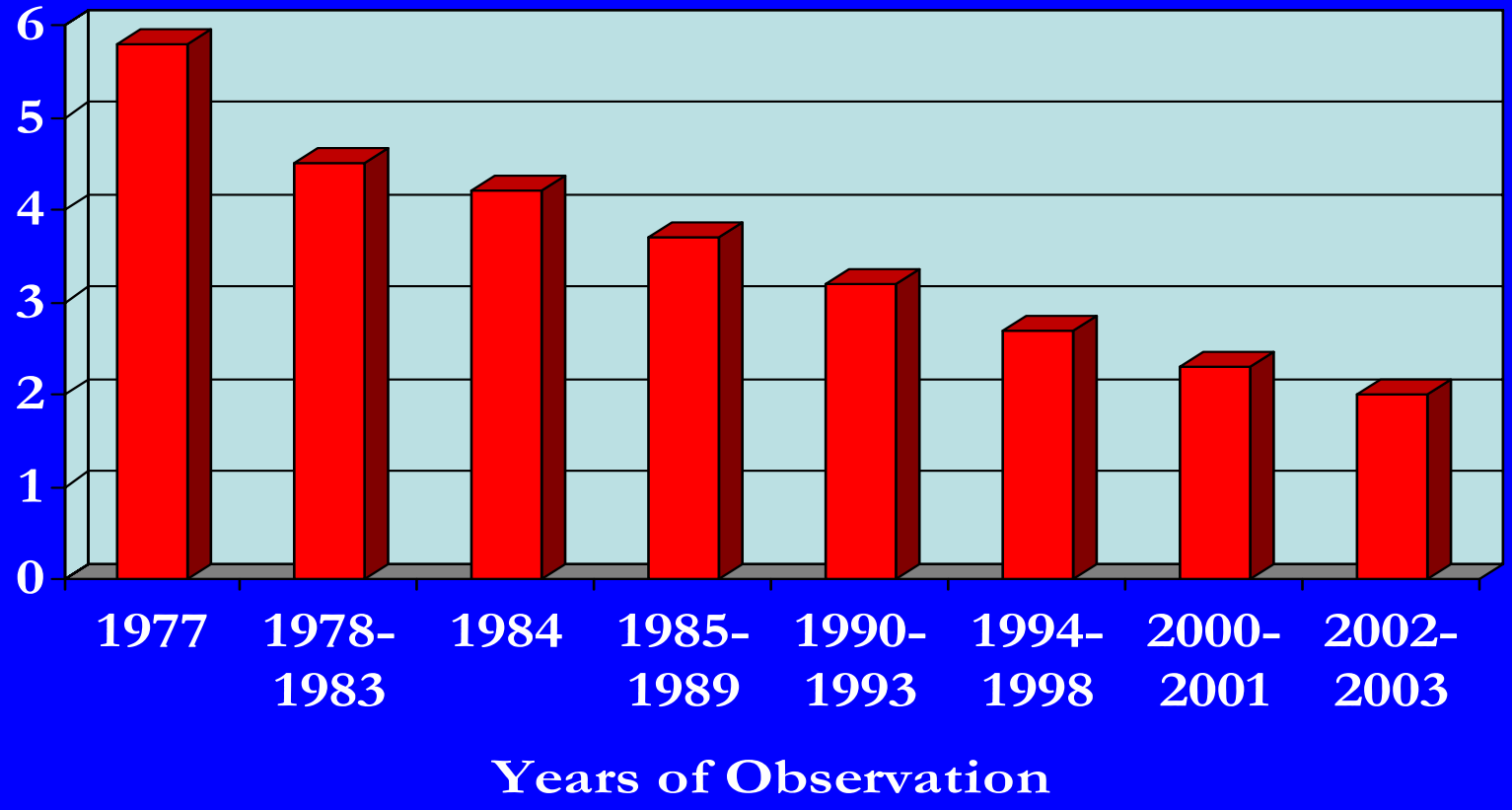
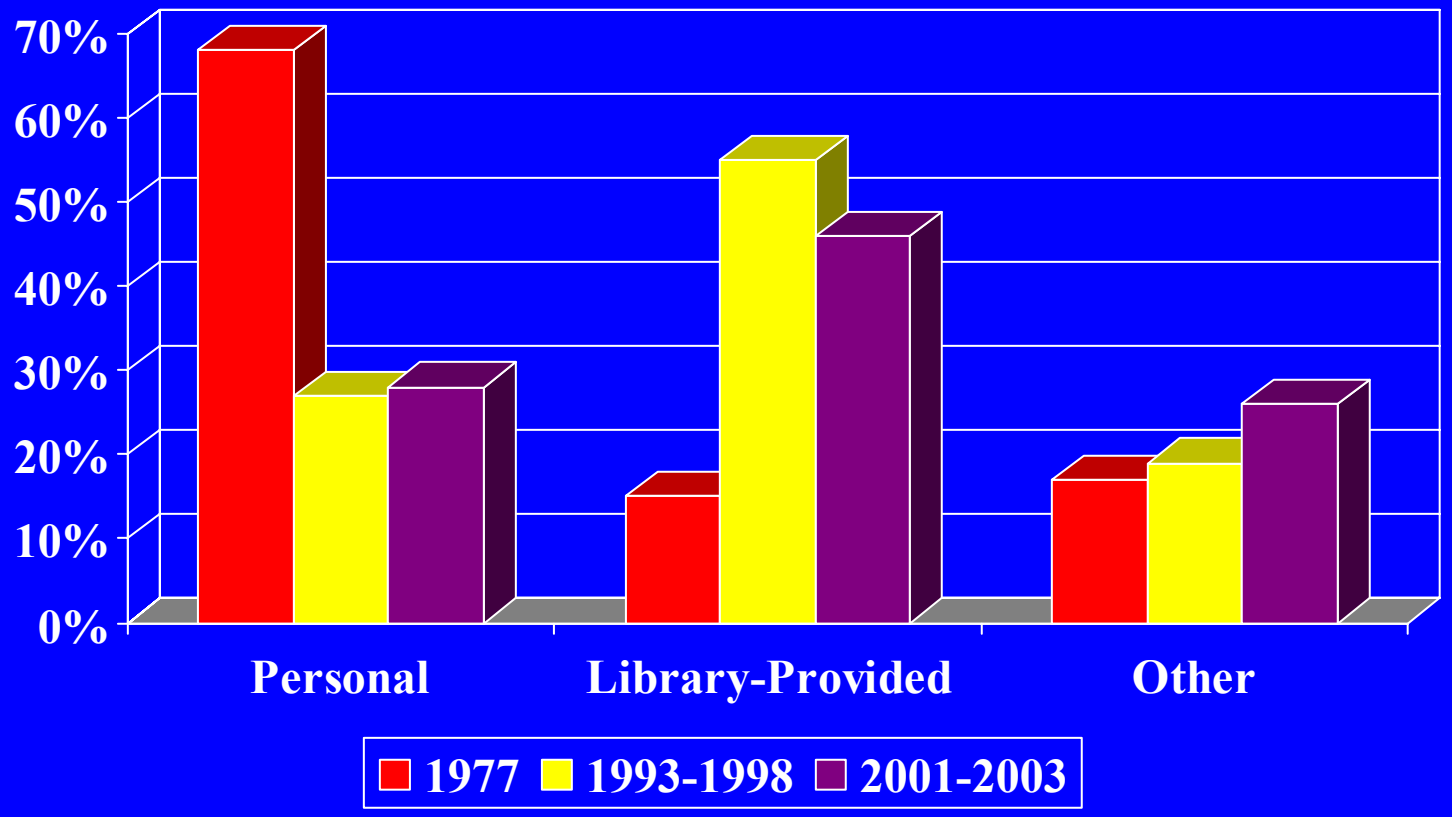
(865) 974-7911 | ctenopir@utk.edu

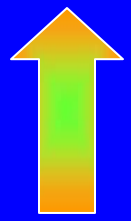
Average Number of Personal Subscriptions to Scholarly Journals



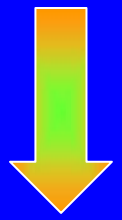
Proportion of Readings of Scholarly Scientific Articles



Source of Readings



% and amount of readings from **separate copies**



use of **personal subscriptions**

Scientists appear to be reading from more journals—at least one article per year from approximately **23** journals, up from **13** in the late 1970s and **18** in the mid-1990s.

3. Scientists need convenience

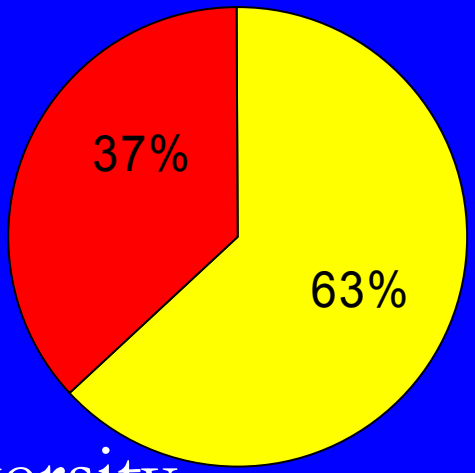
All Scientists Want:

- More sources
- Larger backfiles
- Easy access
- No barriers
- High quality materials

“Convenience drives usage of e-journals…and it is a relative term among scholars.”

Stanford e-Just

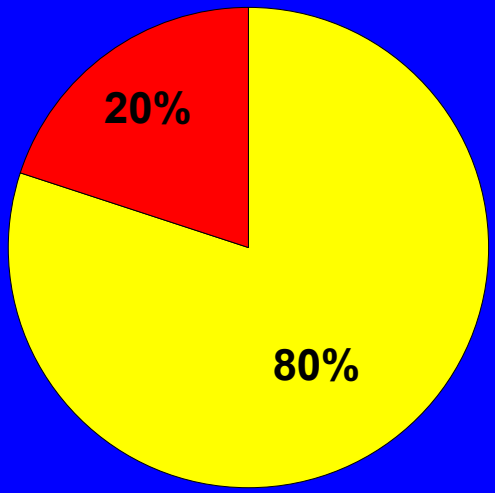
Print or Electronic



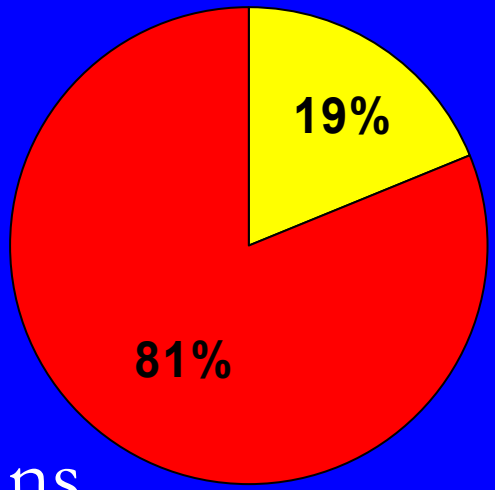
University Science

Electronic

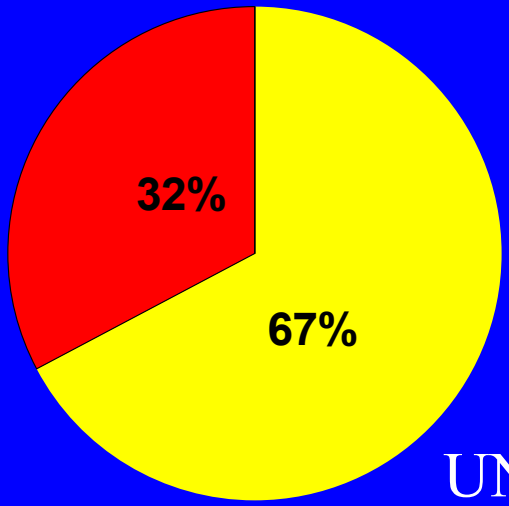
Print



Astronomers



Pediatricians



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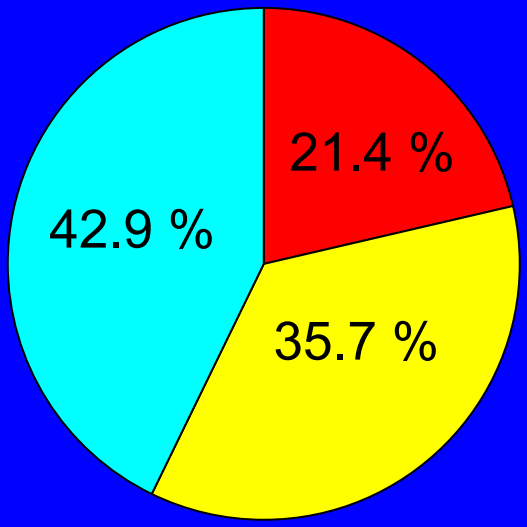
Sources of Readings

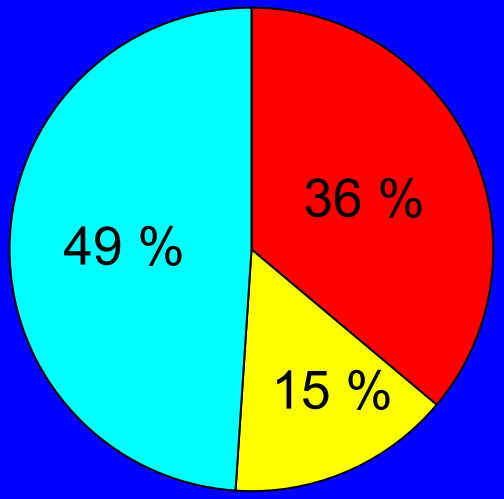


Universities

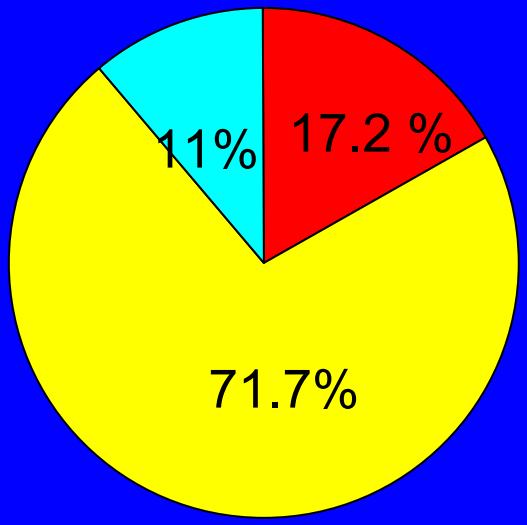
Separate

Personal

Library



Astronomers



Pediatricians

“What is convenient for one scholar is not necessarily convenient for others. With their own idiosyncratic approaches to both print journals and online information, and with their own configuration of professional strengths, histories, and needs, scholars patch together systems that work for them in their context.”

Stanford e-Just