



Electronic Knowledge Resources for University Research and Scholarship

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*Applying scientific thinking
in the service of society*

Agenda

- Background
- Project conceptualization
- Advisory panel
- Results of desktop study
- Usage statistics of University Libraries
- Results of web based survey
- Shortcomings of report
- The way forward

Background

- Requested by Min Naledi Pandor to investigate, as a strategic priority of the Minister Of Department of Science and Technology
- Approached Centre for Research on Evaluation, Science and Technology (CREST) to conduct studies
- Conduct investigation into electronic needs and usage of academic staff and researchers
- Results will inform and recommend DST about :
 - Information needs of established and developing researchers
 - Provide a list of databases for licensing support
 - Scenarios for funding
 - Possible stakeholders

Project conceptualization

Four interrelated study components:

- Desktop Research on topics relevant to the overall project (available knowledge resources; knowledge needs of researchers)
- Analysis of user statistics from 23 university libraries
- Survey of prominent university researchers
 - Selected researchers directly involved in post graduate studies
 - Knowledgeable about literature in their fields
 - Online web based survey
- International models e.g. Brazil, Chili, Pakistan

Advisory Panel

- Librarians were invited to advisory panel discussions
- Status = informal group of interested and expert stakeholders/ do not necessarily represent institutions or sector
- Objective of discussion was to advise on any aspect of the study
- Many useful suggestions and comments gathered
- CREST informed that two primary data collection processes will take place e.g. web based survey of scholars and usage statistics of libraries
- Members of panel were asked for comments on survey

DESKTOP STUDY

Report findings: Desktop research: Electronic knowledge utilization

- Electronic journals are well used by researchers
- E-databases and sophisticated search capabilities have changed the way in which
 - researchers access information
 - Browse and search through the growing number of journal titles and articles
- Most important attributes of eJournals: speed, ease, full text articles, hyperlinks, browsing, direct access , Web 2.0 capabilities etc
- Electronic replaced print
- Personal subscriptions has decreased

Report findings: Desktop research: Scopus vs Web of Science

- Potential funding for citation databases needs special consideration
 - DHET accreditation
 - Assist researchers to identify communities of academics
 - Measure relative impact of various papers and journals
- Scopus has emerged as an important alternative and competitor of Web of Science
- Comparison between databases has revealed that Scopus
 - covers greater number of journals
 - covers 84% of journals covered in WoS
 - Extensive coverage in the fields: life, physical, health and social sciences
 - Does not have the deeper files that WoS has, most citations from 1996
- Web of Science
 - Arts and Humanities journals: 941 of their 1130 are not indexed by Scopus
- Comparisons of the citation measures reveal little difference
- Conclusion:
 - Although duplicative, they are quite complimentary
 - Considering possible change in DHET accreditation policies –can not choose or recommend one above the other

Report findings: Desktop research: Most popular databases

Assessment of most popular publishers and databases (Maghaddam and Talawar, 2008):

- Citation databases: Scopus and WoS
- Multidisciplinary full text databases
 - ScienceDirect (64%)
 - John Wiley (38%)
 - Springer (35%)
- Others
 - IEEE (30%)
 - ACS (23%)
 - Cambridge University Press(17%)
 - OXFORD (15%)
 - BLACKWELL (10%)
 - Taylor and Francis (10%)
- Most popular journals
 - Nature, Science and Proc. National Acad. Of Science

Report findings: Desktop research: Acquisition of electronic resources: two important indicators

- Through consortiums—very well known to SANLiC e.g. Canada, Finland NESLi etc etc
- National Full Subsidy model
 - Two very important models to consider:
 - National Digital Library Programme:(Pakistan)
 - CAPES (Brazil);
 - CINCEL

National Digital Library Programme (NDLP)

- In 2003 Pakistan Higher Education Commission (HEC) launched programme
- Access to 50 000 online books, 23 000 journals
- Public universities fully funded
- Paid by Higher Education Commission
- \$6 million per year
- Negotiations between HEC and publishers

Brazilian Federal Agency CAPES

- Founded in 1951, CAPES (linked to Ministry of Education in Brazil) assists with the formulation of national policies related to post-graduate study.
 - In 2000 it created a Publications Gateway.
 - Portal offers over 35,000 full-text periodicals, 150,000 e-books, and 126 databases.
 - Provides access to more than 1.3 million faculty members, researchers, undergraduate and graduate students.
- Electronic resources are financed by the state for: federal institutions of higher education, state and municipal programs graduate recommended by CAPES, specific research institutions and various private universities. Other institutions may join the access to the portal in category "paying" with restricted access to the collections contract.
- Costs about \$65 million per annum
- CAPES negotiates prices.

CINCEL (Consortio para el acceso a la Informacion Cientifica Electronia)

- **Public-Private Association**

Cincel is a private corporation and a non-profit organization. Its members are 25 universities of Consejo de Rectores (equivalent to 80% of research capacity) and Conicyt.

- **Co- Financing Model:**

Subscription costs are distributed between members according to potential use capacity. All of them have equal access rights.

- **Early Achievements**

Purchase Web of Science (2002), two magazines with high impact factor (Nature and Science) and a collection of 5,000 journals in full text and no embargoes (2008), subsidized in 50% by Conicyt (Program BEIC).

- **Participation of other no-members universities**

Overthrow the distinction "private" and "public"

Benefits reported from both Brazil , Chili and Pakistan:

- Increased database utilization
- Substantial financial savings
- Cost per article downloads decreased
- Cheap and equal access
- Single access for entire system
- Research output and national scientific production has grown vastly
- Powerful negotiation mechanism

User statistics from University Libraries

Report findings: Usage statistics form University Libraries

- 23 journal (aggregator, publisher, bibliographic) databases were selected for comparisons based on prominent subscriptions to SANLiC negotiated contracts
- SANLiC provided national statistics
- Request was send to 23 university libraries for individual statistics on these databases
- Overview of usage statistics by institution uncovered a number of problems
 - Errors in data collation, large number of missing statistics, and inconsistencies
 - Three institutions did not provide stats

Report findings: Usage statistics form University Libraries

- Usage statistics showed two databases of very high usage (EBSCOHost and ScienceDirect)
 - 60% of all full text articles downloaded came from ScienceDirect (3.5 million full text downloaded p.a)
 - Secondly EBSCOHost (million full text downloads)
 - Together they present 75% of all full text downloads across all databases
 - Most searches have been done in EBSCOHost (3.8 million) and SD (1.5 million)

EBSCOHost and ScienceDirect (cont)

EBSCOHost

- although the number of searches has increased over a three year period, the number of full text downloads has decreased
- significantly fewer articles were downloaded (a quarter of SD average total)

What does this show?

- Indicative of the quality of the database-users are not finding an abundance of relevant full text content OR
- First place where researchers explore a subject field?

EBSCOHost and ScienceDirect (cont)

ScienceDirect

- SD has a largest proportion of full text downloads
- What does this show?
 - that SD has a higher quality of content?
- More questions:
What effect does the federated search capabilities bring about, if any?
- Other indicators
 - + WoS and Scopus-lower number of searches were conducted, but still shows a stronghold within the bibliographic databases
 - + Nature and Science also shows huge increases in terms of increase in downloads

Possible list for consideration for state funding

Pertinent considerations

- Citation databases: Scopus and WoS
- Multidisciplinary full text databases
 ScienceDirect
- Aggregator:
 EBSCOHost?????

Other possible considerations:

- Wiley and Blackwell
- Springer
- Journals:
 Nature
 Science

Web based survey

Report findings: Web based survey

- CREST compiled list of experienced researchers from university and science councils
- Invited to web-based survey, following findings emerged
- (1) Information search strategies
 - 99.7% of all respondents search online databases
 - 94.4% perform searches on their own
 - Methods of locating info: full text 57%, citation and bibliographic 57%, and eBooks
 - eJournals enhances interdisciplinary scholarship

Report findings: Web based survey: Findings (cont)

(2) Importance of information resources

- 97% respondents indicated that eJournals are very important for research purposes
- eJournals are significantly more important than printed journals
- SD and EBSCOHost are full text databases mostly used
- SD and EBSCOHost cover less than 50% of top journals in all fields(journals specified by respondents as the most relevant for their research)
- SD has significantly better coverage than EH of the top journals in the field (Agricultural Sciences, Chemical Sciences, Mathematical, Information and Computer Sciences, Physical Sciences)
- EH more “top” journals in Arts and Humanities, Econ & Management sciences and Social Sciences
- Bibliographic databases used most: WoS and Scopus— Scopus with a better coverage

Report findings: Other

- not all institutions have access to the same databases—non subscription to databases
- need a wider range of resources e.g. eBooks and eJournals
- Slow Internet speed!! Despite the efforts of TENET, it still seems that the bandwidth capacity is low and speed of connections is slow.
- lack of access of research councils to databases
- long embargo periods—EBSCOHost
- Access to specific journals e.g Nature and Science

Report: The way ahead

- 17 November 2010 the ASSAf Ad Hoc Advisory Sub Committee of the COMMITTEE ON SCHOLARLY PUBLISHING IN SOUTH AFRICA (CSPiSA) met
- At this meeting it was decided that
 - the CREST report and recommendations were premature and were not based on any evidence.
 - SANLiC to advise ASSAf on how it operates, its cost structure, and what value it adds to the national agenda of access to commercial databases in its negotiations with custodians of databases, how the negotiations operate and who serves on the negotiation team.
 - Site visits to CAPES (Brazil) and CINCEL (Chili)
 - The report is underway of being written
 - This meeting serves to be another consultation round

RECOMMENDATIONS

- Information access (scientific literature) IS NOT an indirect cost of research but IT IS part of essential infrastructure for the national system of Innovation—for established and emerging researchers
- Government should facilitate equal access to information across institutions
- Access to information should not only be for universities but for research councils as well
- Support for the central funding of core journals is well justified considering the benefits that all the other initiatives have shown
- Model must be sustainable
- Solution must be cost efficient
- Very strong negotiation committee to be established

Questions?