

# Impact of the Canadian National Site Licensing Project

A Report to Partners and  
Stakeholders

April 2004



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# Impact of the Canadian National Site Licensing Project

## 1.0 INTRODUCTION

The Canadian National Site Licensing Project (CNSLP) is a 3-year demonstration project being supported by the Canada Foundation for Innovation (CFI) and 64 universities and their partners<sup>1</sup>. CNSLP's budget is approximately \$50 million, of which \$47 million is devoted to purchasing content. Funds come primarily from CFI (\$20 million) and individual universities and their partners (\$30 million), including 9 provincial governments, and the Atlantic Canada Opportunities Agency. CNSLP is one of the first projects of its type in the world to license electronic publications to multiple universities, at a national level. CNSLP's mandate is to license publications primarily in the fields of science, technology, environment and medicine (STM)<sup>2</sup>. As such, it is creating a national "digital library" of scientific publications.

CNSLP's goal is to build Canada's university research capacity by increasing the quantity, breadth and depth of published scholarly content available to academic researchers throughout the country. As such, CNSLP could be a valuable tool in helping the federal government to fulfil its promise to move Canada from 15<sup>th</sup> place internationally to 5<sup>th</sup> place by 2010. CNSLP is striving to transform the research environment by speeding the transition from print-based to digital and value-added forms of scholarly content. To achieve this, it has developed new business and service models by leveraging the buying power of individual Canadian universities and influencing the international scholarly publishing marketplace.

This report is an assessment of CNSLP's experience. It is a synthesis of 2 studies<sup>3</sup> that were commissioned to assess the impact of CNSLP against the project's original goals and objectives. One study focussed on the impact of CNSLP on university researchers – the end users of the scientific publication – from the time of CNSLP inception to 2003. A second study concentrated on CNSLP's impact on university libraries, as reported by library directors in 2003. In addition, this report incorporates information provided by CNSLP concerning participating libraries' "net gain" in their journal holdings.

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<sup>1</sup> Universities' partners include provincial governments, the private sector and non-profit organizations.

<sup>2</sup> This is also the principal mandate of CFI, and a requirement of CFI support.

<sup>3</sup> The studies are published under separate cover and are available from CNSLP.

## 2.0 BACKGROUND TO CNSLP

The traditional form of dissemination of research is through publication in peer-reviewed print scholarly journals. By the 1990s all universities were suffering from a decade of spiralling costs, and many were forced to cancel subscriptions. Double-digit price increases from publishers, proliferation of the number and volume of publications, and rapid technological innovations in electronic publishing, provided a powerful impetus to transform this system. It was hoped that CNSLP would be the catalyst for this transformation.

Prior to CNSLP only the largest universities were relatively well endowed with scientific journals and these were largely in print format. Universities had varying levels of experience with electronic journals (e-journals) and with negotiating site licenses with publishers. Most universities were participating in regional purchasing consortia and understood the potential of large-scale licensing.

When CFI held out the prospect of financial support<sup>4</sup>, libraries and the research community realized they had a shared interest in working toward new models of scholarly communication, and in ensuring that access to published research was improved through electronic dissemination. This transformation involved accelerating the shift to the collaborative licensing of collections of electronic journals at the national level.

Increasingly, libraries no longer purchase subscriptions to individual titles in print format. Instead, they enter into license agreements with publishers or vendors who aggregate titles in specific disciplines. Licensing collections of journals is called site licensing; the terms of a negotiated license are defined for a specified site (which may be a library, campus, province, region, or nation). In recent years, Canadian libraries have entered into site licensing arrangements with publishers and vendors of electronic scholarly journals for access through regional consortia and at individual institutions. In an effort to secure better prices, a more extensive range of content and the most advantageous usage terms, CNSLP helped libraries to join together to negotiate licenses at the national level.

CNSLP successfully negotiated pan-Canadian licenses for the period 2001-2003, with 7 international publishers, making available 718 electronic journals and a number of accompanying citation tools. The equivalent value of the print counterparts of the publications that CNSLP licensed was over \$300 million, compared with an actual licensing cost of \$45 million. In addition, CNSLP's agreements limited cost increases during the license period which were previously growing at annual double-digit rates. Growing costs were increasingly forcing libraries to cancel subscriptions, producing a downward spiral in the availability of research information which lies at the heart of innovation. By introducing an element of price stability, CNSLP's 3-year licenses also hoped to make it easier for university libraries to manage their budgets.

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<sup>4</sup> CFI's support needed to be matched by other partners.

### 3.0 KEY ASSESSMENT ISSUES

*Ongoing operations of the project must be based on a thorough evaluation of the three-year pilot. The project is a test of all aspects of national site licensing: governance, management, funding, content, and delivery. (CFI application)*

As an integral part of its request for support from CFI and other partners, CNSLP committed itself to evaluate its various activities and outcomes. CNSLP was viewed as an experiment in national site licensing, and CNSLP staff and advisors supported the need to undertake a series of assessment activities.

To lay the groundwork for its evaluation activities, CNSLP staff commissioned an Evaluation Framework (see Appendix). The framework identified a number of assessment issues, some of which were directed at understanding CNSLP's impact on end users (university researchers) and others at understanding its impact on libraries. The purpose of the framework was to set out CNSLP's goal, objectives, activities, outputs, impacts and effects, and the logical relationship among them. The framework helped to identify the key assessment issues that would be explored. Two major fact-finding studies were commissioned: the first, a survey of library directors; and the second, a survey of university researchers active in fields of science, technology, environment and medicine (STM). This report combines the findings of those two studies with some additional information provided by CNSLP and member libraries.

#### **Assessment Issues**

The purpose of CNSLP's various assessment activities was to explore whether, and to what extent, the program had achieved its original objectives; particularly, what had been its impacts and effects – both intended and unintended. CNSLP had set out 6 specific objectives at the outset of the project. These were:

#### **CNSLP Objectives**

1. Foster innovation by expanding the volume, timeliness, quality and ubiquity of STM information available to researchers.
2. Accelerate the adoption of electronic information delivery by university libraries.
3. Accelerate the use of electronic information by university researchers.
4. Affordability: Achieve economies-of-scale in the range and cost of electronic information licensing at the national and institutional levels.
5. Equity: Improve access of researchers at smaller institutions to electronic information.
6. Provide an element of price predictability and stability.

## **4.0 CNSLP IMPACTS**

CNSLP's mission is to support university research by helping libraries to better meet their clients' needs for research information. Thus, CNSLP has a two-fold goal – to help university libraries and thereby help researchers. This report explores the extent to which CNSLP has met its objectives. It uses the findings of the library directors survey and the researchers survey, together with additional information provided by CNSLP, to understand CNSLP's impact on the research and library communities.

### **4.1 IMPACTS ON RESEARCHERS**

CNSLP was designed to have an indirect impact on university researchers by helping to improve the services that their libraries offer. CNSLP resources were directed at researchers working in STM (science, technology, environment, medicine) disciplines. Although these researchers are in a minority (most researchers work in the social sciences and humanities), they account for a majority of the funded research work that takes place in Canadian universities.

In particular, CNSLP wanted to provide more information (700+ publications from 7 publishers) more quickly, through electronic publishing. It also aimed to lower researchers' "knowledge access overhead" (for example, the unproductive time spent gaining access to information) and thereby expand the time that researchers would have available to do their work. Ancillary potential benefits were improvements in grant writing, more effective teaching, and higher overall research productivity. This section of the evaluation explores CNSLP's impact on researchers.

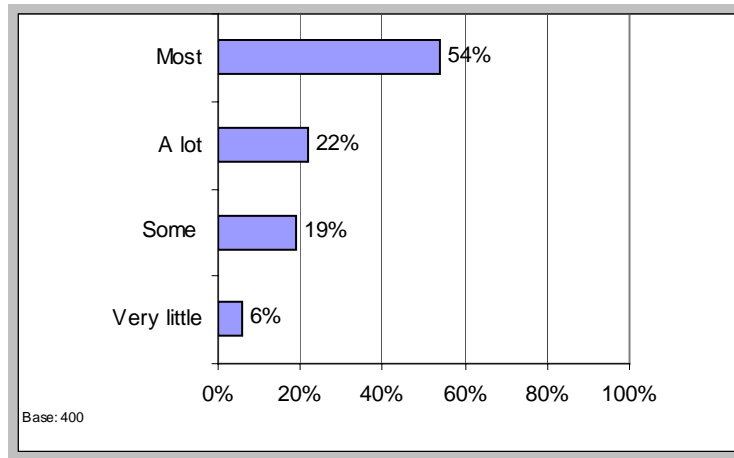
#### **4.1.1 Accelerating the Use of Electronic Information**

For centuries, scholarly publishing has taken the form of printed journals – especially peer-reviewed publications. A key issue for CNSLP was whether the research community, long accustomed to receiving print materials, would embrace the new electronic publishing model that was rapidly gaining ground, and widely seen to be the way of the future. Would electronic publishing (e-journals) be accepted by university researchers? Would it change the pattern and volume of their information use? What would be its overall impact on efficiency and productivity?

##### **Use of E-Journals**

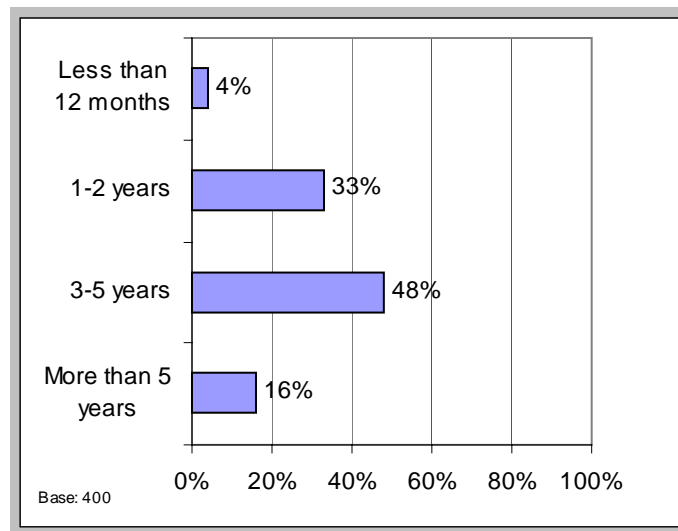
The researchers survey indicated that three-quarters of researchers (76%) are now accessing *most* or *a lot* of their information through e-journals provided to them by their university library.

**Exhibit 4.1 Proportion of Journals Accessed Electronically  
Total Researchers**



E-journal use is a comparatively recent phenomenon in academic circles. While a majority of researchers (64%) have used e-journals for 3 years or more, a substantial minority (37%) are new users, having 2 years or less experience. These users gained their e-journal experience during the period in which CNSLP became active. This suggests that CNSLP has reinforced a trend that began earlier.

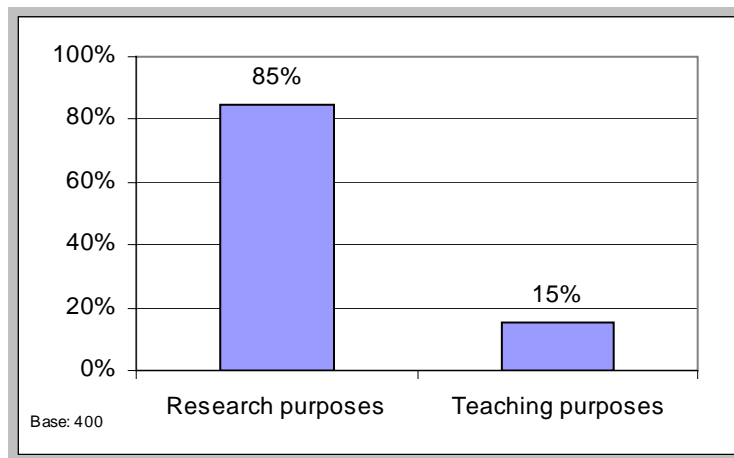
**Exhibit 4.2 Number of Years Accessing E-journals  
Total Researchers**



Average number of years: 4.0

CNSLP was specifically designed to advance Canada's innovation agenda, by increasing the effectiveness of university research. And indeed, survey participants utilize scientific publications largely for research purposes, with some spill over to teaching.

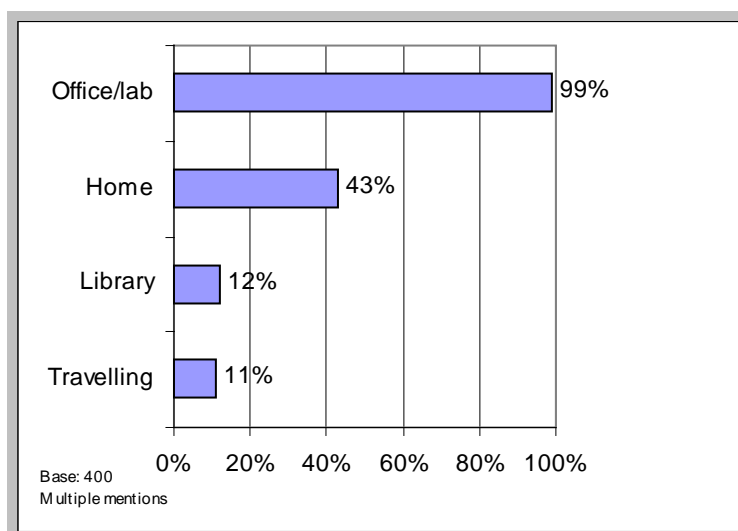
**Exhibit 4.3 Main Purpose for Accessing E-journals  
Average Percent (%)  
Total Researchers**



### Accessibility of E-Journals

One of CNSLP’s objectives was to improve the efficiency of research by lowering unproductive time spent gaining access to information – for instance time spent walking to libraries, consulting indexes, ordering journals, and so forth. One of the benefits of e-journals is that they permit researchers to gain access to information at their convenience - *in their offices or labs*. However, a considerable number also gain access to e-journals while *working at home* (43%) or even while *travelling* (11%). The ability to have access to scientific information any time, anywhere, is undoubtedly making research more efficient.

**Exhibit 4.4 Main Locations to Access E-journals  
Total Researchers**



## Increased Use of E-Journals

The increased number of journals that CNSLP is helping university libraries to make available to researchers is driving a corresponding increase in use.

**Exhibit 4.5 Journal Titles Used/Accessed Electronically in a Typical Working Month  
Current vs. 2 Years Ago  
Total Researchers**

	Total	
	Current (400) %	2 years ago (390)* %
<b>Number of journal titles used (paper and electronic)</b>		
1-10	48	54
11-20	31	29
21-50	18	16
51 or more	3	2
<b>Average number of journals (#)</b>	18.4	16.7
<b>Percent (%) accessed electronically</b>		
0 (none)	--	20
1-49	20	49
50-79	39	22
80-100	42	9
<b>Average percent (%)</b>	65	29

\* Ten respondents did not provide information for this section

--zero or nil

Whereas two years ago researchers accessed on average 16.7 journals per month, they report they are now making use of 18.4 journals. Evidently, they are expanding the breadth of information they are utilizing.

Researchers' use of electronic journals is growing rapidly. Eighty-one percent (81%) report they are accessing between 50-100% of their journals electronically today, compared with only 31% - 2 years ago. Where 2 years ago, on average only 29% of researchers nationally were relying on e-journals, today the proportion is 65%. This represents a remarkable change in behaviour in a very short period of time.

This is even more strongly illustrated, when comparing access behaviour by share of journals, as the use of e-journals has nearly doubled in all university categories from 2 years ago, prior to CNSLP implementation.

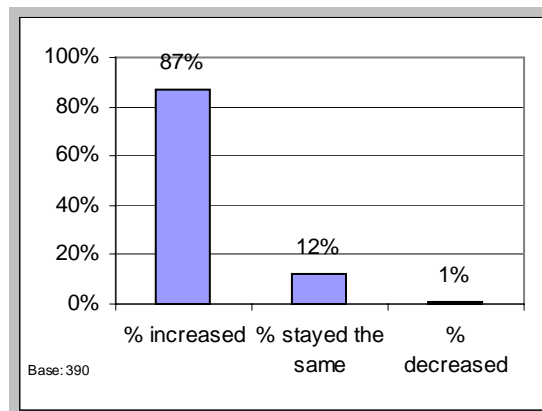
**Exhibit 4.6 Comparative Access Behaviour in a Typical Working Month  
By Total Number of Journals (Electronic/Paper)  
University Type**

	Total %	Medical/Doctoral %	Comprehensive %	Undergraduate %
<b>Current</b>	<b>(7,368)</b>	<b>(2,629)</b>	<b>(2,356)</b>	<b>(2,383)</b>
Accessed electronically	65	70	69	57
Bound paper/print	35	31	32	44
<b>2 Years Ago</b>	<b>(6,593)</b>	<b>(2,494)</b>	<b>(2,058)</b>	<b>(2,041)</b>
Accessed electronically	31	37	32	21
Bound paper/print	70	63	69	80

More striking is the fact that in a typical working month there was nearly a 137.8% increase in the number of e-journals that the researchers are accessing now compared to 2 years ago: in total, researchers surveyed are currently accessing 4,811 e-journals versus 2,023 two years ago.

Another way of highlighting this shift is that 87% of respondents indicated an increase in the proportion of titles they access electronically, compared with 2 years ago. In contrast, only 12% of researchers continued their previous pattern of journal access.

**Exhibit 4.7 Change in E-journal Access in a Typical Working Month  
Current vs. 2 Years Ago  
Total Researchers**



What factors account for this significant shift in information-accessing behaviour? An important factor is that through CNSLP's national site licensing efforts, researchers now have access to a larger, more relevant range of journals in their field. In fact, 58% of researchers who reported increased e-journal usage specifically indicated that the *improved number and variety of e-journals* had spurred their increased use. Another important factor is that researchers appreciate the *improved accessibility and convenience* that e-journals offer.

**Exhibit 4.8 Top Volunteered Reasons for Increasing E-journal Access  
Total Researchers**

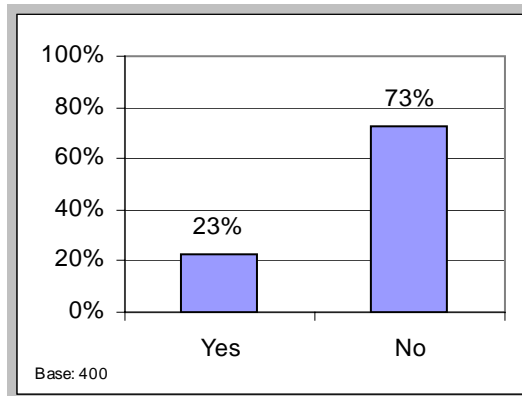
<b>Reason</b>	<b>Total (340)* %</b>
<b>Range of journals (net)</b>	<b>61</b>
More/better variety of e-journals/more choice/more journals in my field	58
Preferred journals available only electronically	3
<b>Accessibility/convenience (net)</b>	<b>34</b>
More/better accessibility	25
Convenience of access/can access at office/lab/home/anywhere	12
<b>Searching &amp; retrieval (net)</b>	<b>14</b>
Easy to use/navigate/user friendly	13
Better/more search tools/engines/links/more search capabilities	2
<b>Other mentions</b>	
Time saver/faster/quicker/efficient use of time	7
Personally subscribe to more e-journals	5
University/library has cancelled paper subscription/print journals more difficult to find	4
Costs less/it's free	3
More/becoming computer literate	3
More awareness/knowledge of availability of e-journals	2

\*Base: includes those researchers who increased their electronic journal access from 2 years ago

### **Impact on Researchers' Subscription Behaviour**

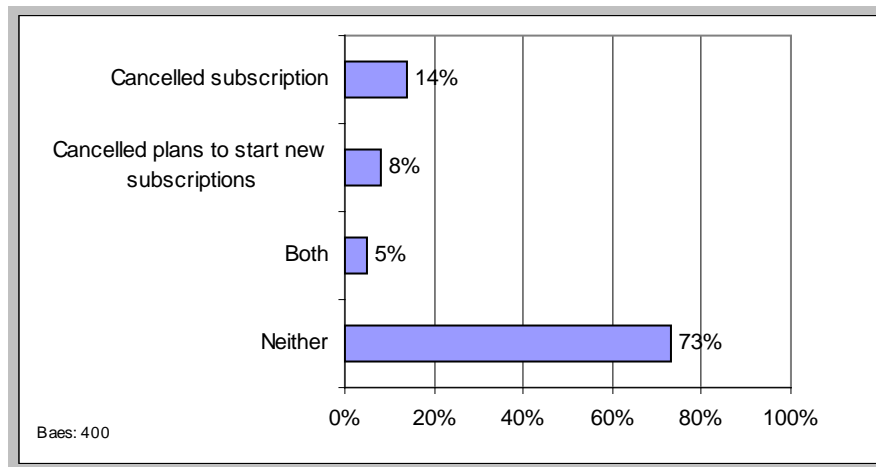
The researchers survey was concerned with the impact that electronic journal access (through university libraries) would have on researchers' individual subscription behaviour. Would researchers drop their personal journal subscriptions once they had access through their library? Almost three-quarters of researchers (73%) indicated that they would *not personally subscribe* to journals if they were available online through their library.

**Exhibit 4.9 Decision to Subscribe to a Journal Available on Library's Website  
Total Researchers**



In fact, 27% of researchers reported they had already *cancelled existing subscriptions or plans to start new subscriptions*. Given the high cost of journals today, this represents a significant potential saving to the research system. To date, however, a majority of researchers (73%) had *neither cancelled existing subscriptions nor had plans to start new ones*. This may reflect the fact that in many instances journal subscriptions are bundled with association memberships and researchers do not pay for them separately.

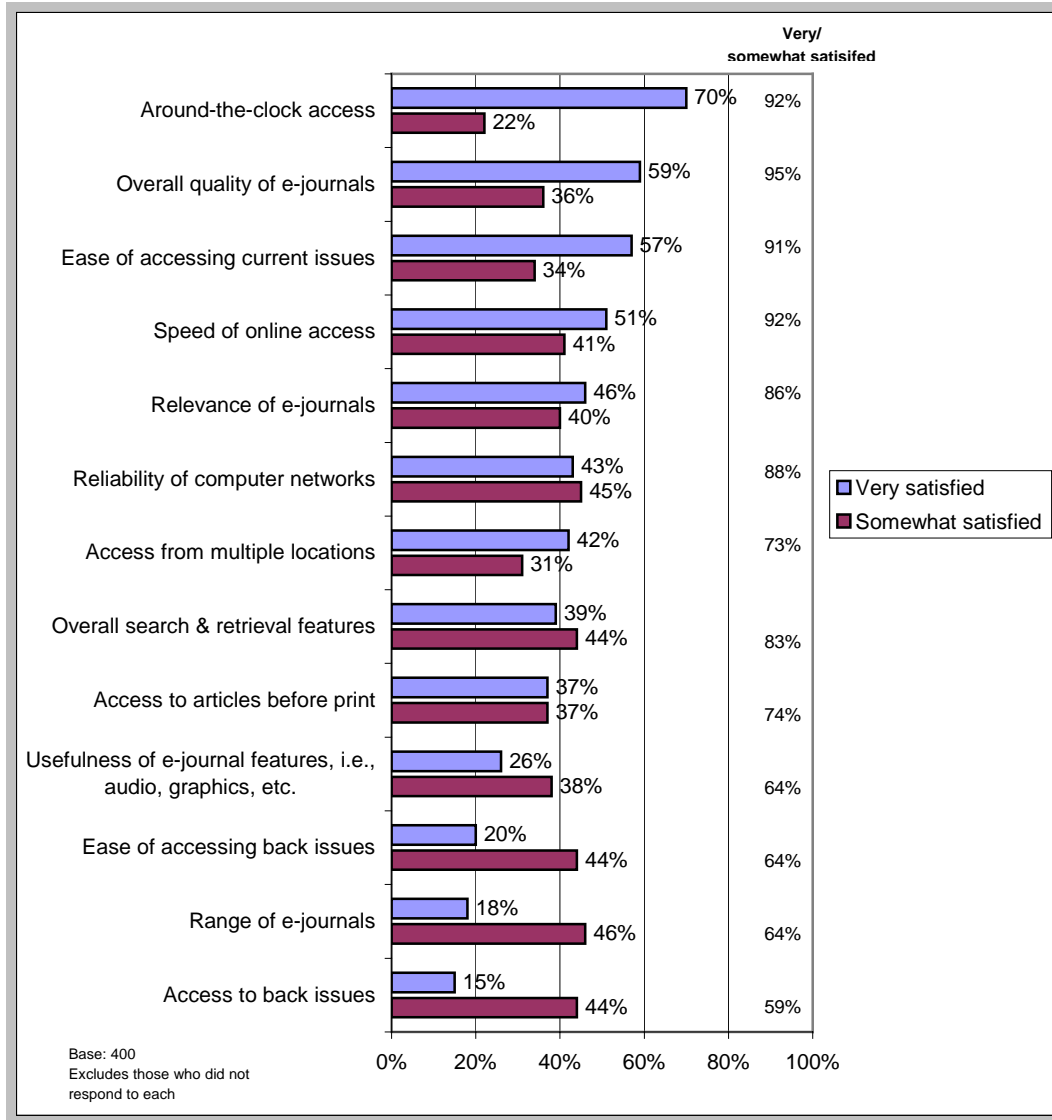
**Exhibit 4.10 Past Year Subscription Pattern  
Total Researchers**



## Satisfaction With E-Journal Attributes

CNSLP asked active researchers to indicate what features of e-journals they most appreciated. The e-journal characteristics that most satisfied researchers were *around the clock access* (70% - very satisfied), *overall quality of e-journals* (59% - very satisfied), *ease of accessing current journals* (57%- very satisfied) and *speed of online access* (51% - very satisfied).

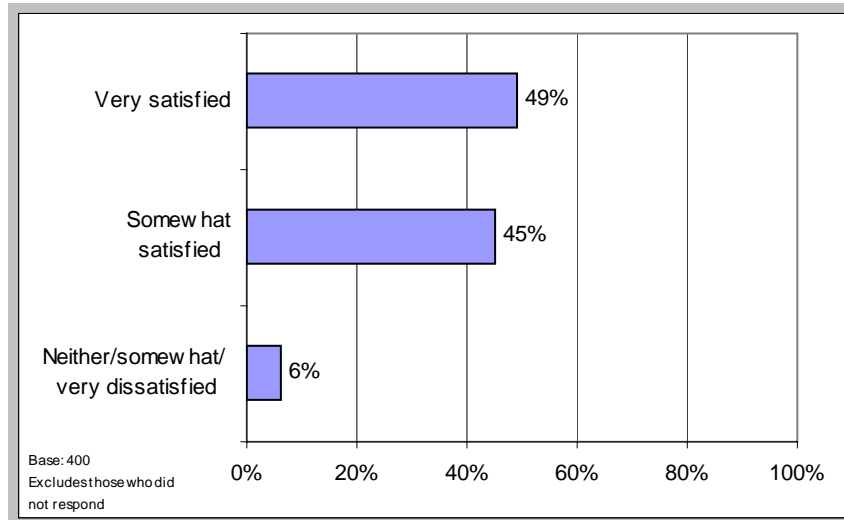
**Exhibit 4.11 Reported Satisfaction Ratings with E-journal Attributes  
Total Researchers**



Many researchers are also pleased with the fact that e-journals are available much faster than their print counterparts, which speeds access to knowledge.

Overall, just under 50% of researchers reported being *very satisfied* with their experience using e-journals. Another 45% were *somewhat satisfied*. Very few users (6%) were anything less than satisfied.

**Exhibit 4.12 Overall Satisfaction with E-journals**  
**Total Researchers**



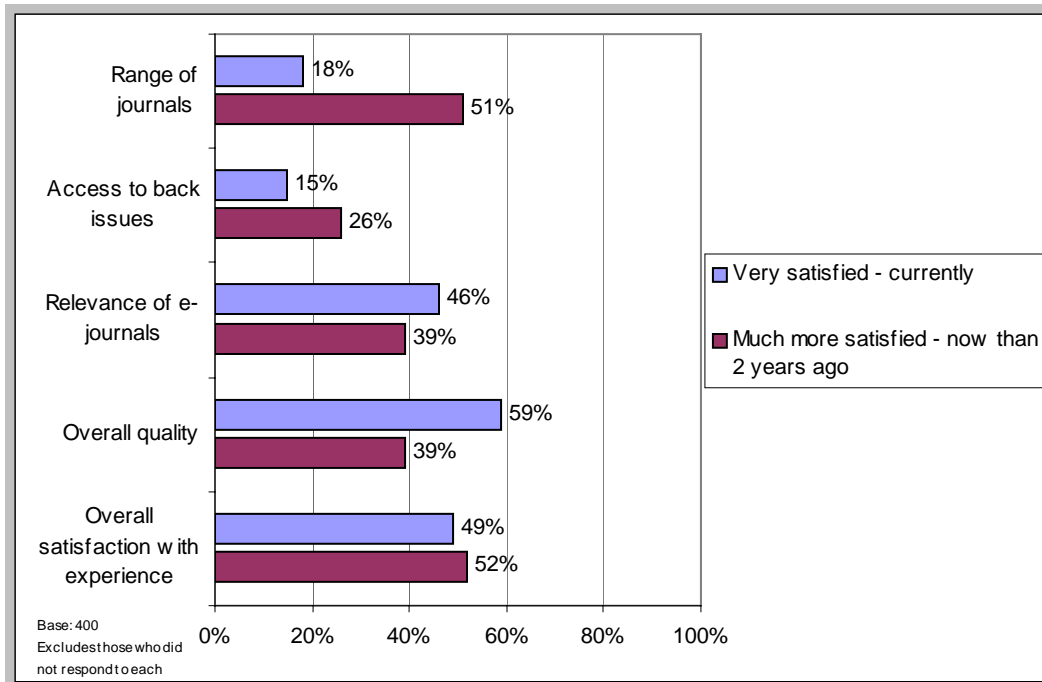
\*Based on a 5 point scale where "5"=very satisfied and "1"=very dissatisfied

### Range and Relevance Judged High

Not only are researchers now pleased with many of the attributes of e-journals, their level of satisfaction has increased since the CNSLP license took effect. For example, compared with 2 years ago (from the Fall 2002 study period), 52% of researchers are *much more satisfied* and an additional 35% are a *little more satisfied* with their *overall e-journal experience*. A similar proportion reported they are *much more satisfied* now compared with 2 years ago, with the *range of journals* now being offered.

Comparative satisfaction with *journal relevance* and *overall quality* has also grown significantly since the CNSLP license came into force, albeit somewhat less so than for most other attributes<sup>5</sup>. One area where researchers would appreciate better assistance is in *access to back issues*<sup>6</sup>.

**Exhibit 4.13 Comparative Satisfaction Ratings – Current vs. 2 Years Ago**  
**Percent (%) Very Satisfied, Much More Satisfied**  
**Selected E-journal Attributes**  
**Total Researchers**



Interestingly, even in areas where researchers’ satisfaction with e-journals is comparatively low (e.g. *range of journals*), a majority (51%) declare themselves to be *much more satisfied* now than 2 years ago. Clearly, the movement toward e-journals is having a significant impact in the research community.

### Impact of E-journals on Researchers

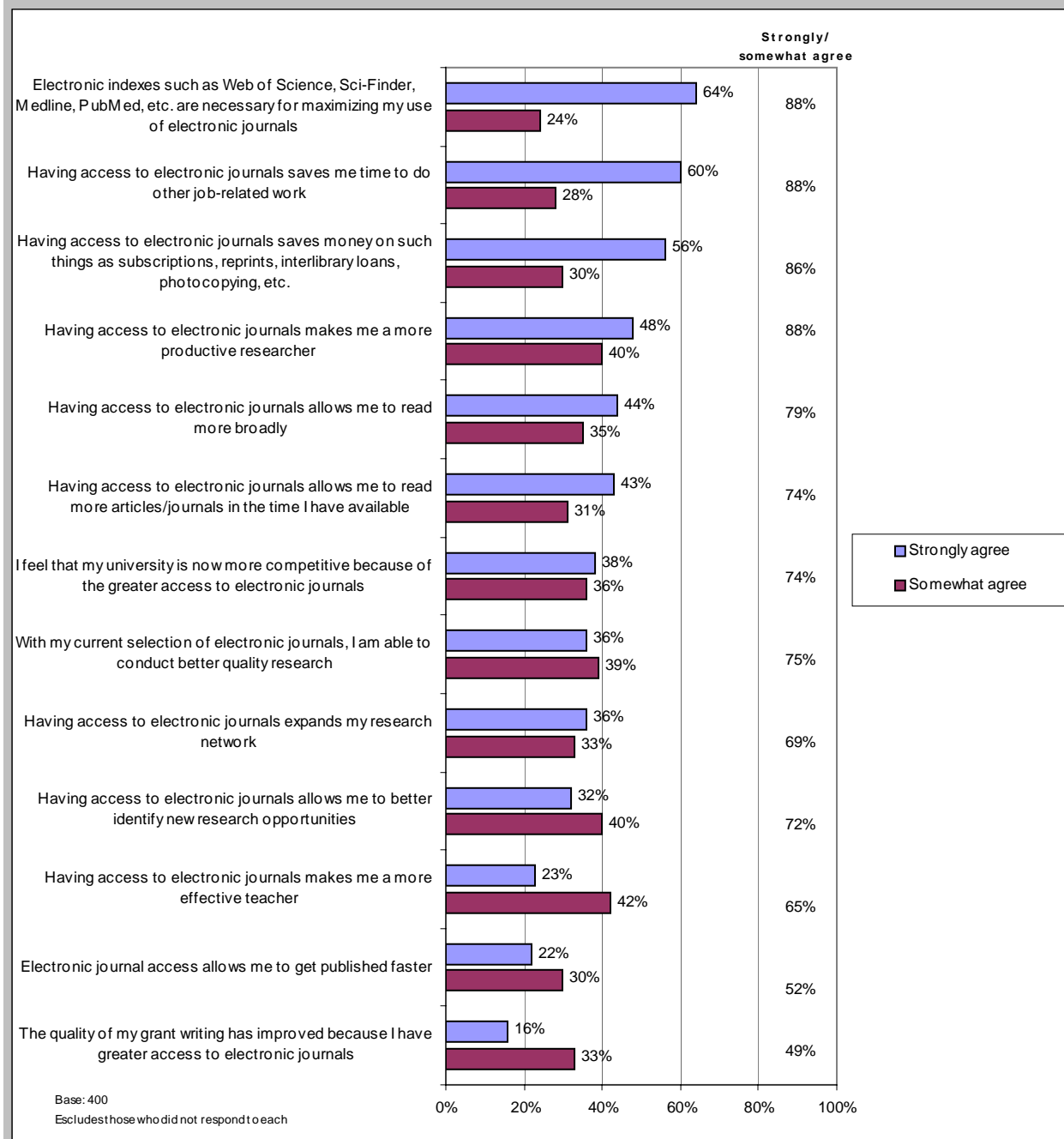
In addition to wanting to know more about researchers’ satisfaction with e-journals, CNSLP was interested in an equally important question – the impact of e-journals on researchers’ work. Researchers were asked to indicate their level of agreement with a number of impact statements. The results are notable.

<sup>5</sup> The license that CNSLP recently negotiated with Elsevier should boost this satisfaction measure in future.

<sup>6</sup> However, this is largely beyond the control of CNSLP.

For example, 60% of researchers *strongly agree* that *having access to electronic journals saves (them) time to do other job-related work*. A comparable number (56%) *strongly agree* that *having access to electronic journals saves money on ... subscriptions, reprints, interlibrary loans, photocopying, etc.*

**Exhibit 4.14 Impacts of E-journal Access  
Total Researchers**



Based on a 5 point scale where "5" = strongly agree and "1" = strongly disagree

Nearly half of researchers (48%) *strongly believe that having access to electronic journals makes (them) a more productive researcher; for example, by allowing (them) to read more broadly (44% - strongly agree) or to read more articles/journals in the time (they) have available (43% - strongly agree). Many researchers (36%) strongly agree that with (their) current selection of electronic journals (they) are able to conduct better quality research.*

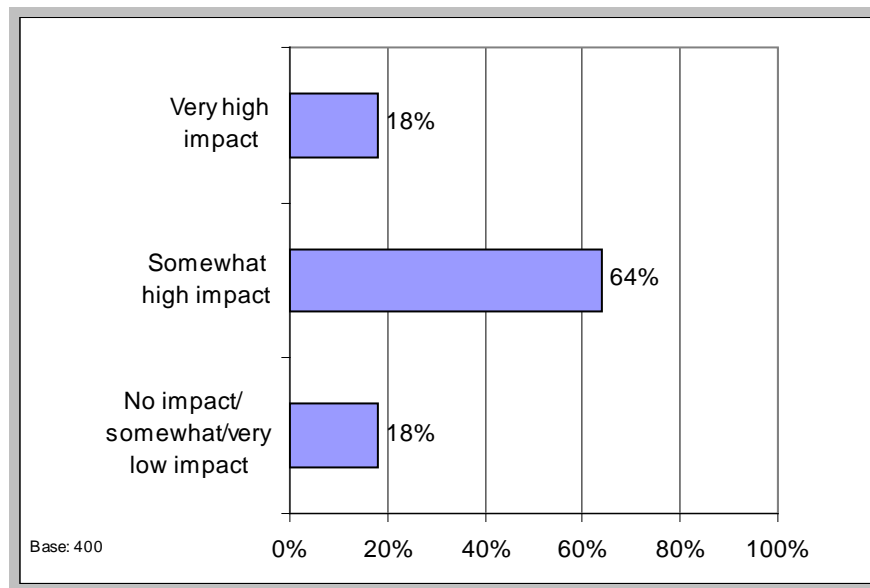
About a third of researchers also *strongly agree that having electronic journals allows them to:*

- *expand (their) research network (36%)*
- *better identify new research opportunities (32%).*

This translates into many researchers (about 4 in 10) overall – especially those at Comprehensive and Undergraduate institutions where journal access was most limited prior to CNSLP – *strongly agreeing that my university is now more competitive because of greater access to electronic journals.*

Overall, just over 80% of researchers believe that e-journal access has had a *very or somewhat high impact on their ability to conduct research.*

**Exhibit 4.15 Overall Impact of E-journal Access on Ability to Conduct Research  
Total Researchers**



\*Based on a 5 point scale where "5"=very high impact and "1"=very low impact

## **4.2 IMPACTS ON UNIVERSITY LIBRARIES**

CNSLP had a dual role. The first was to facilitate innovation on the part of university researchers, and the second was to facilitate innovation in university libraries. The preceding section (chapter 4.1) discussed CNSLP's impact on researchers. This section explores its impact on libraries.

### **4.2.1 Accelerate Adoption of Electronic Information Delivery**

A major objective of CNSLP was to accelerate the adoption of electronic information delivery by university libraries, which was already under way in a number of institutions, but by no means common. Prior to CNSLP a number of university libraries had begun moving away from print formats to electronic delivery (e-journals), often through regional consortia. However, progress across the country was uneven, transaction costs were high<sup>7</sup>, and prices were not the best available because the volume of purchases was not large.

By procuring a series of national site licenses (ultimately from 7 publishers) and supporting their implementation, CNSLP intended to accelerate plans to adopt e-journals and to reduce the financial and technical risk for universities in their transition to electronic information delivery. It was hoped that by bringing new partnership money to the table (through CFI and other funding partners) it would lower libraries' e-journal entry costs and the risks associated with it, as well as make it easier for libraries to justify an increased university investment in the required electronic information delivery infrastructure. CNSLP commissioned a survey of library directors to see if it had achieved these objectives.

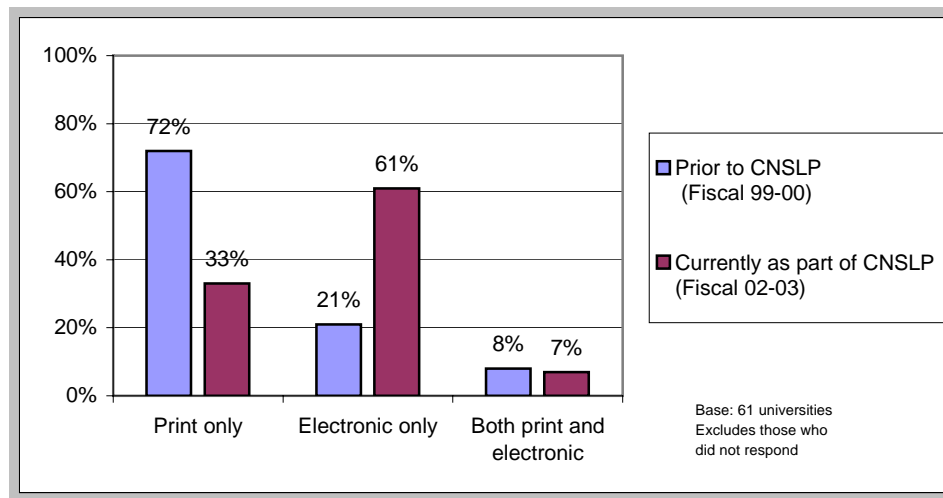
### **CNSLP Reverses Print Journal Patterns**

CNSLP has clearly had a major impact on the makeup of university libraries' periodical holdings in science, technology, environment and medicine (STM). Prior to CNSLP taking effect, reporting libraries carried on average 72% of STM journal titles in print format only versus 21% in the form of e-journals (8% in both formats). Today, libraries reported that 61% of their holdings are in electronic format only versus 33% in print (7% in both formats). CNSLP has been a key factor in reversing the acquisition pattern for journals.

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<sup>7</sup> Each university had to negotiate its own arrangements and this required significant staff time.

**Exhibit 4.16 STM Journal Titles in Library Collection – Prior and Currently with CNSLP  
Average Percent (%)  
Total Universities**



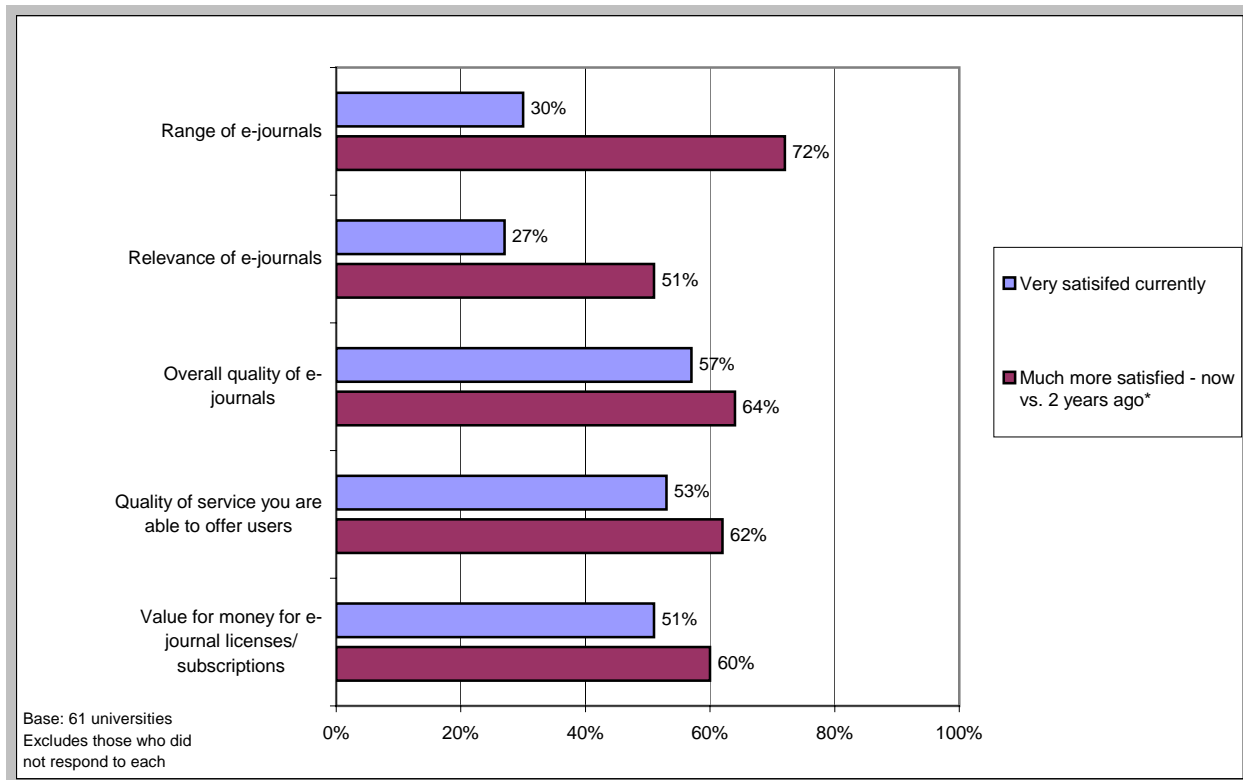
The print versus electronic discussion has a critical dimension that is masked by these numbers. In most instances, libraries that receive a print copy of a scientific journal receive only one copy (or at best a limited number of copies). That means that only one person at a time can use that copy and typically that user must travel to the library to consult the journal. In contrast, electronic site licenses make a copy of each journal available simultaneously to every researcher at a university through multiple locations. No more missing or damaged copies/articles. Electronic site licenses vastly increase the actual availability of journals.

## Significant Progress in 2 Years

To delve further into the question of satisfaction, CNSLP asked library directors to compare how satisfied they are today (post CNSLP) – compared with their circumstances 2 years ago – (pre CNSLP).

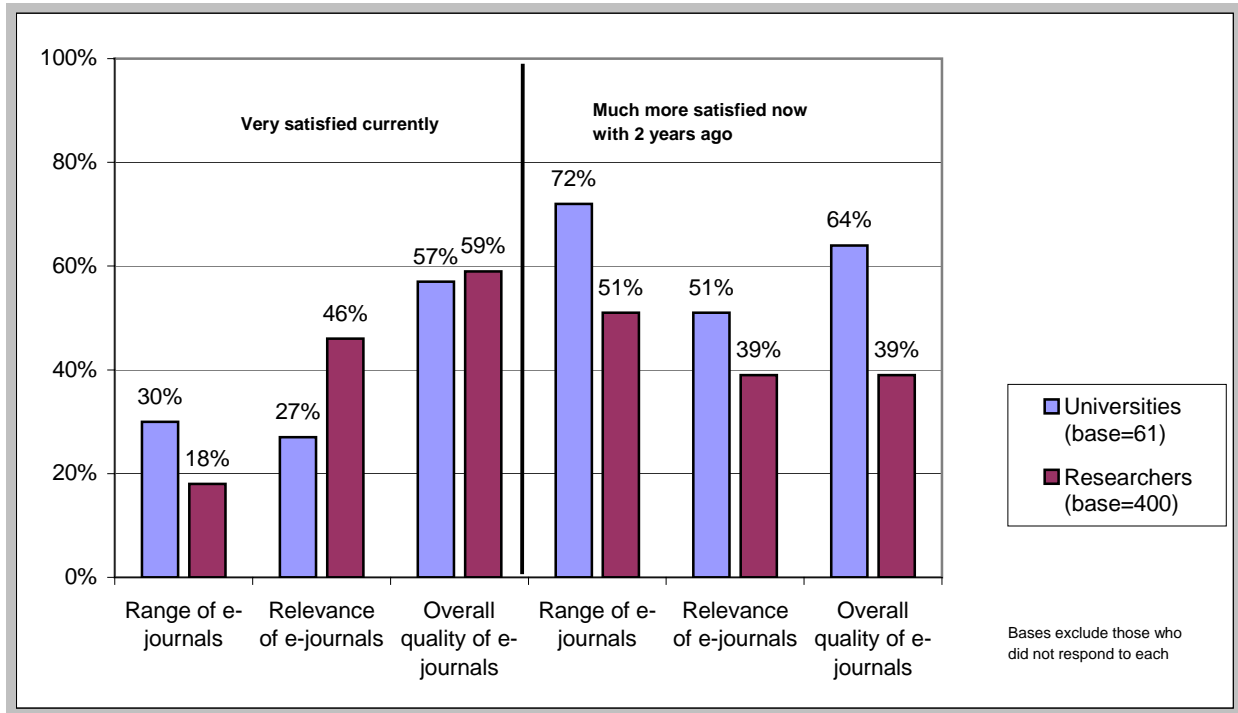
What emerges is that in a majority of instances and on a majority of items, library directors are both *very satisfied* currently and *much more satisfied* now than they were two years ago. It is especially telling that even though satisfaction with the current mix of e-journals (*range of e-journals*) is still comparatively low (30% very satisfied currently), a large majority (72%) of library directors are still *much more satisfied* with their selection of e-journals now than 2 years ago.

**Exhibit 4.17 Comparison of Satisfaction Ratings – Current vs. 2 Years Ago\***  
**% Very Satisfied, Much More Satisfied**  
**Selected Attributes**  
**Total Universities**



It is informative to compare the respective satisfaction levels of both library directors and researchers (the two studies posed comparable questions).

**Comparison of E-journal Satisfaction Ratings – Current vs. 2 Years Ago\***  
**Percent (%) Very Satisfied, Much More Satisfied**  
**Selected Attributes**  
**Total Universities/Total Researchers**



\*Fiscal 1999-2000

Library personnel and university researchers are equally satisfied with the *overall quality of e-journals* now available (57% and 59% respectively - very satisfied). But a larger percent of library personnel are *very satisfied* with the *range of e-journals* compared to researchers. Whereas researchers are more satisfied than library personnel (46% versus 27% - very satisfied) with the *relevance of e-journals*.

However, a higher percentage of library directors than researchers reported being *more satisfied* now compared to 2 years with the *range, relevance and overall quality of e-journals*.

## **Accelerating the Transition to E-Journals**

When asked directly whether CNSLP “*has allowed our library to accelerate our transition to e-journals*”, library directors reported overwhelmingly that it had. Fully 73% of library directors *strongly agreed* with this statement, and another 18% *somewhat agreed*. Their verbatim comments were most supportive of CNSLP’s role.

Of course, CNSLP’s efforts were not the only factor in libraries’ transition to electronic information delivery. While CNSLP provided a significant financial and administrative impetus, in many instances universities still needed to contribute their own resources. CNSLP helped libraries to raise awareness of their needs within their own communities. As one library director said “*CNSLP has been a great promotional tool for academic libraries. It has raised awareness of important issues at the federal level and with university administrations, issues such as the place of information resources in the research infrastructure. These have been important contributions.*” (Comprehensive). In response to the library directors survey, 48% of libraries reported they had received new money from their university to participate in CNSLP, and 64% expected they would receive new funds in the future.

### **4.2.2 Affordability, Range, Price Predictability**

Two of CNSLP’s objectives were aimed at improving libraries’ journal cost structure. One principal objective was to improve the affordability of e-journals through the bulk purchase of a series of national site licenses. It was hoped that through national site licensing CNSLP could lower total costs to the university library system over what could be achieved through individual licensing by each university (or through regional/local licensing). Along with improved affordability, CNSLP also aimed to improve the volume and the quality of the content that could be made available. As a side benefit, CNSLP and its partners anticipated that institutions would be able to re-deploy funds saved to other areas of need in the library.

An additional cost objective was to provide an element of price predictability and stability in a system where costs were continually rising and where library managers found it increasingly difficult to predict journal costs.

## Impact on Collections

At the time CNSLP was being created there was an extremely large variation in individual university libraries' STM (science, technology, environment, medicine) holdings. Most institutions had only a small fraction of the holdings of the best-endowed university<sup>8</sup>, and at many institutions, holdings had been in decline for some years. Although there was wide variation, on average the 63<sup>9</sup> reporting universities held only 134 of 718 journal titles of seven major STM publishers identified by CNSLP.

CNSLP's national site licensing activities increased all libraries' holdings to the full 718 STM titles of these key publishers, representing a 446% increase in access. In other words, on average researchers at institutions that previously held 134 titles immediately gained access to an additional 586 scientific publications. Prior to CNSLP, researchers would need to request their libraries to place inter-library loans with other institutions to gain access to publications that were not available or that were missing. This introduced a significant cost and time delay. Post CNSLP, researchers found that many of the journals they needed to consult were now available online through their own university library.

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<sup>8</sup> University of Toronto

<sup>9</sup> University of New Brunswick and St. Thomas University reported their holdings together.

## Impact of CNSLP on Library Finances

An important question for CNSLP concerned the impact the project would have on libraries' operating costs to date and anticipated costs over the next three years. The transition to e-journals potentially impacts many aspects of a library's operations: direct acquisition costs, administration/operations, staffing and training. What were CNSLP's impacts at the local level and what are the likely future trends? The library directors survey commissioned by CNSLP contains a number of relevant findings.

The first item of interest was **direct acquisition costs** for e-journal and print subscriptions. To date, a high percent of libraries reported increases in their e-journal spending, reflecting the CNSLP agreement, and resulting decreases in their print spending. Not surprisingly, library directors are predicting that their overall e-journal subscription costs will continue to rise, but their print costs will decline in the future as they move toward electronic delivery.

**Exhibit 4.20a Cost Impact of CNSLP Participation – To Date and Anticipated Acquisition Related Range of Cost Changes Total Universities**

Cost Item	% of Universities	
	To date	Anticipated in Next 3 Years
<b>Direct Acquisition</b>		
<b>Overall e-journal subscriptions</b>		
Any decrease	7	2
No change	8	8
Any increase	71	67
Average percent (%) cost change	+78.4	+55.3
<b>Overall print subscriptions</b>		
Any decrease	59	51
No change	20	20
Any increase	5	3
<b>Average percent (%) cost change</b>	<b>-11.3</b>	<b>-16.6</b>

Note: Percentages for each item may not add to 100% due to non-responses

E-journals' impact on **administrative and operating costs** (contract negotiations, maintenance/repairs/binding, document delivery, storage and archiving and computer systems) have been relatively benign to date, with many library directors reporting no change in costs as a result of CNSLP. In the future, they predict modest declines in these costs.

**Exhibit 4.20b Cost Impact of CNSLP Participation – To Date and Anticipated  
Administrative and Operating Costs  
Range of Cost Changes  
Total Universities**

Cost Item	% of Universities	
	To date	Anticipated in Next 3 Years
<b>Administration/operations</b>		
<b>Overall journal contract negotiations</b>		
Any decrease	15	25
No change	49	36
Any increase	8	8
<b>Average percent (%) cost change</b>	<b>+2.3</b>	<b>-3.5</b>
<b>Maintenance/repairs/binding</b>		
Any decrease	28	43
No change	51	36
Any increase	0	0
<b>Average percent (%) cost change</b>	<b>-4.7</b>	<b>-9.3</b>
<b>Document delivery services</b>		
Any decrease	20	33
No change	48	33
Any increase	5	5
<b>Average percent (%) cost change</b>	<b>-2.4</b>	<b>-7.0</b>
<b>Storage and archival: onsite and offsite</b>		
Any decrease	12	18
No change	64	49
Any increase	0	2
<b>Average percent (%) cost change</b>	<b>-0.6</b>	<b>-2.2</b>
<b>Computer systems: hardware and software</b>		
Any decrease	0	0
No change	57	43
Any increase	18	30

Cost Item	% of Universities	
	To date	Anticipated in Next 3 Years
<b>Average percent (%) cost change</b>	<b>+8.7</b>	<b>+4.5</b>

Note: Percentages for each item may not add to 100% due to non-responses

Likewise with **staffing and training costs**, experience to date shows the move to e-journals has had no significant impact on libraries' staffing or training costs; most report these have not changed to date, although at just over a third of libraries, costs have risen for staffing and user training. Future expectations are that many associated staffing costs are likely to decrease somewhat in response to e-journals, whereas training costs are likely to rise somewhat.

**Exhibit 4.20c Cost Impact of CNSLP Participation – To Date and Anticipated Staffing and Training Range of Cost Changes Total Universities**

Cost Item	% of Universities	
	To date	Anticipated in Next 3 Years
<b>Staffing</b>		
<b>Overall staffing</b>		
Any decrease	0	7
No change	57	54
Any increase	15	8
<b>Average percent (%) cost change</b>	<b>+0.9</b>	<b>+0.4</b>
<b>Collection development</b>		
Any decrease	8	16
No change	48	43
Any increase	16	15
<b>Average percent (%) cost change</b>	<b>+0.8</b>	<b>-1.2</b>
<b>Technical services</b>		
Any decrease	16	30
No change	41	39
Any increase	21	13
<b>Average percent (%) cost change</b>	<b>0</b>	<b>-4.0</b>
<b>Circulation and shelving</b>		
Any decrease	23	26
No change	54	49
Any increase	3	3
<b>Average percent (%) cost change</b>	<b>-3.8</b>	<b>-4.2</b>
<b>Reference/information services</b>		
Any decrease	5	7
No change	46	44
Any increase	28	26
<b>Average percent (%) cost change</b>	<b>+2.2</b>	<b>+2.6</b>

Cost Item	% of Universities	
	To date	Anticipated in Next 3 Years
<b>Staffing (continued)</b>		
<b>Reserve related</b>		
Any decrease	8	18
No change	66	49
Any increase	7	8
<b>Average percent (%) cost change</b>	<b>+0.3</b>	<b>+0.6</b>
<b>Interlibrary loans services</b>		
Any decrease	16	28
No change	56	36
Any increase	8	8
<b>Average percent (%) cost change</b>	<b>+0.7</b>	<b>-4.4</b>
<b>Training</b>		
<b>Staff training</b>		
Any decrease	0	0
No change	44	44
Any increase	36	36
<b>Average percent (%) cost change</b>	<b>+3.2</b>	<b>+3.3</b>
<b>User training</b>		
Any decrease	0	0
No change	43	43
Any increase	38	34
<b>Average percent (%) cost change</b>	<b>+4.7</b>	<b>+5.1</b>
<b>Overall percent (%) cost change</b>	<b>+5.0</b>	<b>+1.2</b>

Note: Percentages for each item may not add to 100% due to non-responses

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The Impact Group

## Cost Impact Mixed

Issues of costs and savings are actually quite complex. There are three key cost issues that need to be considered. First, is CNSLP's impact on the acquisition cost of STM e-journals; that is, the prices that CNSLP negotiated compared with the prices that libraries and regional consortia were paying. Second, is CNSLP's impact on libraries' overall journal expenditures; that is, the total amount they devote to journals. Third, is the impact on the overall cost of library operations, including such items as staffing, training, and so forth.

With respect to the cost of e-journal acquisition, CNSLP seems to have had the desired impact. Libraries agree that national site licensing has yielded lower subscription prices than libraries could have negotiated on their own or through regional consortia. Sixty percent (60%) of library directors surveyed declared themselves to be *very satisfied* with the *prices negotiated by CNSLP* and a further 33% were *somewhat satisfied*. Similarly, 60% of library directors reported they are *much more satisfied* with the *value for money of CNSLP's e-journal licenses and subscriptions*, and another 23% are a *little more satisfied* compared with 2 years ago.

### Library Directors - In Their Own Words

- *By joining CNSLP we were able to afford many more e-journals at a fraction of the regular cost. This allowed us to get other e-resources with our budget. (Medical/Doctoral)*
- *Nous en avons eu plus pour notre argent! Notre université compte plusieurs campus. Nous aurions dû prendre plusieurs abonnements pour le même titre ou négocier des licences "multisites". (Comprehensive)*
- *We get products and titles we could never have afforded on our own. (Undergraduate)*

### Library Directors - In Their Own Words

- *À court terme, l'impact était très positif puisque les sommes récupérées sur nos abonnements ont servi à acheter d'autres titres. (Medical/Doctoral)*
- *Les prix obtenus sont très bons et nous avons bénéficié d'un généreux programme de subvention du FCI. L'ajout de certains titres a permis d'enrichir notre collection à moindres coûts que si nous avions négocié seul. (Comprehensive)*
- *This is a small library. If CNSLP did not exist we would not have ventured into large scale e-journal access. Neither would most small institutions. (Undergraduate)*

However, there is greater variation among libraries' on the question of CNSLP's impact on overall journal costs. A number of libraries point out that as they were not previously subscribing to many of the publications that CNSLP is now providing, the fact they are now doing so actually increases their overall acquisition costs. In the short term, they have received funds from outside sources to cover these costs, but they are concerned that once

those funds expire they will need to continue paying for the CNSLP titles from their existing budgets.

With respect to CNSLP's impact on the costs related to library operations, experience to date and projections for the future vary considerably, depending on the library in question and the specific items tested. In a number of areas the potential for future cost decreases is somewhat encouraging, although in a number of instances there has been limited increases in libraries' cost base to date, and reasonable prospects for savings in the future in a number of other areas. However, only 19% of library directors *strongly agree* that CNSLP *has allowed their library to reduce or avoid costs*, while an additional 38% *somewhat agree*. A larger number (43%) *neither/somewhat/strongly disagree* to some extent.

### **Impact on Price Predictability and Stability**

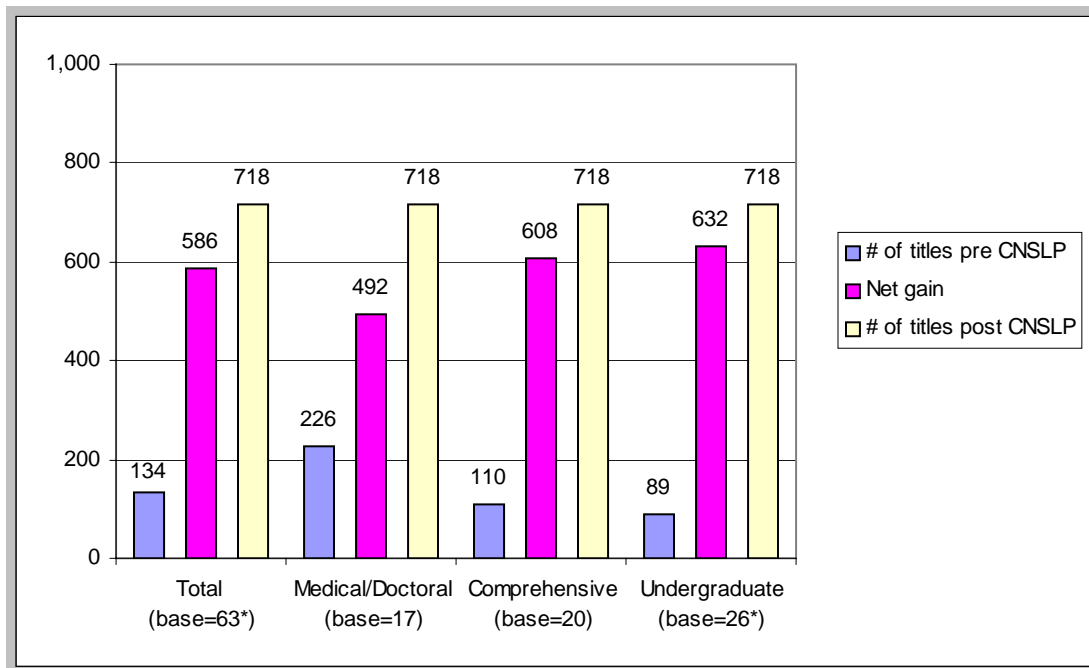
University libraries have been bedevilled by the upward spiralling cost of journal subscriptions. What were often perceived as arbitrary annual price increases made it very difficult to plan and budget for acquisitions. By negotiating a series of 3-year licenses that contained fixed price escalators, CNSLP hoped to make the library planning and budgeting environments more predictable. It also hoped that by capping the price increases, it would free up funds for libraries to meet their high priority needs.

CNSLP's library directors survey posed two questions, the answers to which shed light on how well it has achieved this objective. When asked directly whether CNSLP has allowed their library to establish more predictable budgets, 12% of library directors *agreed strongly*, and another 45% *somewhat agreed*. A higher proportion (42%) *strongly agreed* that CNSLP *allowed their library to make better use of their acquisition budgets*, and a further 30% *somewhat agreed*. Similarly, 42% of library directors also *strongly agreed* that CNSLP *has allowed their library to adopt a more efficient e-journal procurement process* and a further 33% *somewhat agreed*.

### 4.2.3 CNSLP's Impact on Equity

CNSLP anticipated that its national site licensing activities would have a particularly large impact on smaller institutions by expanding the range and volume of collections available to their researchers. Prior to CNSLP, periodical holdings varied widely among institutions, depending on their size and type. Larger, Medical/Doctoral institutions held an average of 226 titles, which still fell short of the post CNSLP average, but more than twice the number at Comprehensive universities, and almost three times those at smaller Undergraduate institutions.

**Exhibit 4.21 Average Journal Titles Pre and Post CNSLP by University Type**



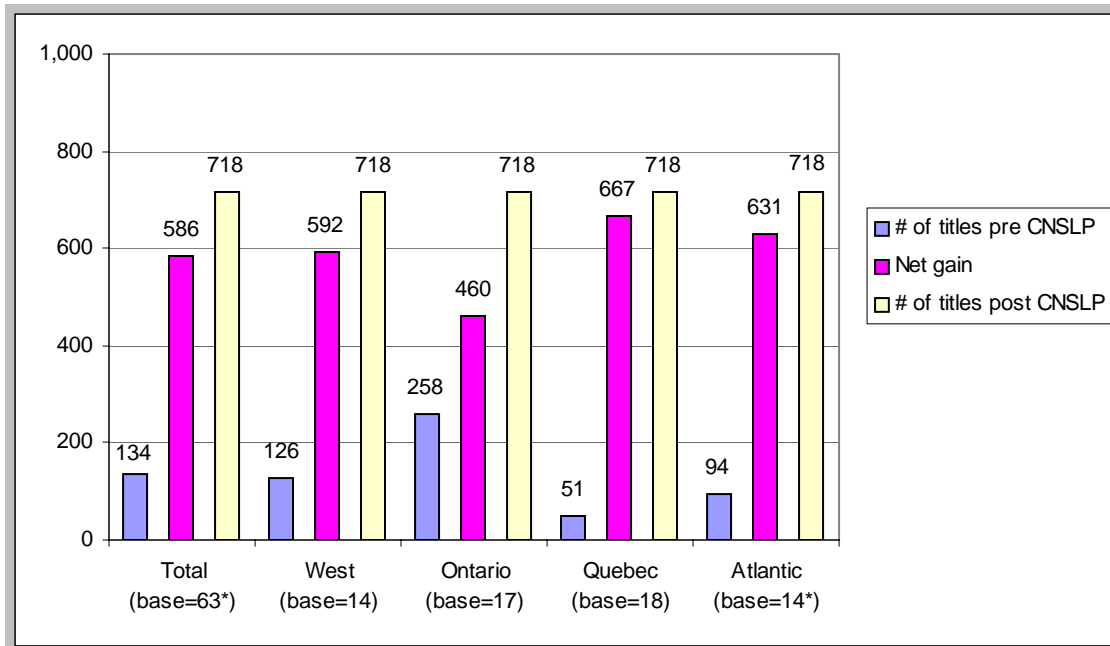
\*One university did not provide their pre CNSLP number of titles

Notes: Number of pre CNSLP titles include both print and electronic formats.

Number of post CNSLP titles was calculated on the assumption that all universities received the total number of e-journal titles available from CNSLP (718). This figure does not take into account print copies.

Clearly, CNSLP had a major effect on increasing journal holdings at a majority of institutions, with smaller and less research-intensive universities benefiting the most. CNSLP had an equally dramatic effect on libraries' holdings when viewed from a regional perspective. For example, Quebec libraries carried an average of only 51 of CNSLP's 718 titles (7%), and Atlantic university libraries carried only 94 titles (12%). University libraries in Western Canada carried on average only half the titles of their Ontario counterparts, pre CNSLP.

**Exhibit 4.22 Average Journal Titles Pre and Post CNSLP by Region**



\*One university did not provide their pre CNSLP number of titles

Notes: Number of pre CNSLP titles include both print and electronic formats.

Number of post CNSLP titles was calculated on the assumption that all universities received the total number of e-journal titles available from CNSLP (718). This figure does not take into account print copies.

Through its national site licensing activities, CNSLP was able to level the playing field among institutions. For the first time, researchers at smaller universities and in smaller provinces had access to a comparable number of scientific journals as their colleagues at larger institutions located in larger provinces.

One of the most promising impacts of CNSLP is on researchers' perception of their universities' competitiveness that results from a leveling of the information playing field. Eighty-two percent (82%) of researchers surveyed at Undergraduate (small) universities either *strongly or somewhat agreed* that as a result of CNSLP *(their) university is now more competitive because of the greater access to electronic journals*. Results were similar at Medical/Doctoral (68% - strongly/somewhat agree) and Comprehensive institutions (71% strongly/somewhat agree).

CNSLP has not entirely eliminated disparities in libraries' holdings. Although CNSLP did license publications from 7 major international publishers<sup>10</sup>, many desirable publications were left unlicensed<sup>11</sup>. Additionally, CNSLP's mandate was to concentrate on publications in the fields of science, technology, environment and medicine, which are not equally relevant to all

<sup>10</sup> On 28 January 2003 CNSLP announced that it had negotiated a site license for over 1,500 Elsevier journals, which will be available to 61 universities. Previously, only 11 universities had access to these publications.

<sup>11</sup> CNSLP's \$45 million Cdn investment did, however, result in over \$300M of content becoming available to universities.

institutions<sup>12</sup>. Larger institutions still have larger budgets that allow them to acquire additional subscriptions/licenses to more journals. However, it is hoped that the CNSLP model of national site licensing will become the norm, in which case e-journal access will continue to increase at all participating institutions.

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<sup>12</sup> Many universities have larger information needs in social science and humanities than in STM.

## 5.0 CONCLUSIONS

The following are the major conclusions we have drawn about CNSLP, its impacts, and the extent to which it has achieved its original objectives.

### 5.1 OBJECTIVE #1 - FOSTER INNOVATION

CNSLP has had a dramatic effect on increasing the volume of STM (science, technology, environment, medicine) information (e-journals) now available to university researchers. Although the situation of individual university libraries prior to CNSLP differs considerably, we can say that on average CNSLP increased the volume of titles accessible from seven key STM publishers by nearly 450% from most universities' pre-CNSLP circumstances. By any measure, this is a substantial increase in the volume of knowledge available to the research community.

An inherent feature of e-journals is that they speed the flow of knowledge and thereby improve the timeliness of information flow. Publishers can post electronic versions of journals almost instantaneously. That means they can by-pass the lengthy printing, distribution, and cataloguing phases; information arrives far more quickly than in the past. Researchers who have access to e-journals therefore have a leg up on their colleagues who are wholly dependent on print – they receive the most up-to-date information much more quickly.

What of the quality of CNSLP's offerings? The issue of journal quality is complex, and many factors come into play. Quality also has a subjective element as perceptions of quality sometimes differ among researchers and among library directors. One obvious factor influencing the quality of CNSLP's offerings is finances. CNSLP's initial CFI grant imposed an upper limit on the number of publications that it could license. It could not make available every "quality" publication from every publisher, and compromises had to be made. Another factor is that the essence of site licensing entails the purchase of "bundles" of journals from publishers, rather than "cherry-picking" individual publications. This means that some of the publications in the bundle will inevitably be of lower quality than others, which may have an effect on the overall perceived quality of a site license. In spite of these limitations, the researchers and library directors surveyed gave high marks to the quality of CNSLP's offerings.

A major objective of CNSLP is to increase the ubiquity of STM journals; which has a number of dimensions. First, is the matter of "reach" – the number of libraries through which publications are available. On this measure CNSLP was a huge success. Although a few libraries had access to many CNSLP licensed publications prior to CNSLP<sup>13</sup>, the majority did not. CNSLP immediately made over 700 high quality publications available at virtually every institution, regardless of size or location.

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<sup>13</sup> Only 7 libraries had 300 or more CNSLP titles before the project took effect.

A second aspect of ubiquity concerns how available journals are to prospective users. If a library receives only one copy of a journal, then only one person can use that copy at a time. Electronic publishing has made available an unlimited number of copies to users, simultaneously. In essence, every user has access to his or her personal copy. This is especially important at universities that have more than one campus, or multiple libraries on a single campus, which would otherwise need to purchase multiple copies of popular journals.

A third aspect of ubiquity is that e-journals do not need to be read on the library's premises. Because libraries mostly receive one or at best a few copies of a journal,

those copies need to be held in a reference section, and researchers are often not allowed to remove them from the library premises. But with electronic journals researchers can have access anywhere they are connected through a computer. One aspect of e-journals that researchers most appreciate is that they can use them in their offices, labs, at home, or while travelling. On this measure CNSLP has added significant value. Further, researchers are reporting that they indeed have more time available for research-related activities because they spend less time gaining access to publications.

### Researchers - In Their Own Words

- *Ability to prescreen journals (saving paper and time). Able to read more articles. Access a broader range of journals. Easy to check small details. Very efficient. (Medical/Doctoral)*
- *The immediacy of getting online, the convenience of it. That really captures it, being able to sit in my office and see something on Medline and being able to access it before it's even in print. (Comprehensive)*
- *Facile de repérer. L'archivage on ne perd plus les documents. Économie de papier. (Comprehensive)*
- *L'accessibilité. Possibilité de consulter une plus grande variété de revues. (Comprehensive)*
- *Some benefits of accessing electronic journals are that it is quicker and there is no competition for the hard copies. I also appreciate that I am guaranteed access day or night. (Undergraduate)*

### Researchers - In Their Own Words

- *I can access a wider range of data and it is much more convenient - you can access it from home, 24 hours a day. (Medical/Doctoral)*
- *It has allowed me to widen my intellectual and research vistas. I feel that what they are doing is very good. I'm overwhelmed with the potential. Very happy. (Comprehensive)*
- *Directement accessible depuis le bureau. Accessibilité. Accès à un plus grand nombre de revues. (Comprehensive)*
- *Ease of access. Being a small university and able to access journals we didn't have access to before this project began. (Undergraduate)*
- *Ne pas avoir à aller chercher les revues. La rapidité. (Undergraduate)*

Not only has CNSLP made a significant volume of new information available to researchers, the research community is making use of it. Researchers are consulting more publications than in the past (18.4 journals on average, compared with 16.7 prior to CNSLP). Moreover, they have completely reversed their usage patterns from a primary dependence on print two years ago, to use of e-journals today.

A majority of researchers agree that e-journal access is allowing

them to better identify new research opportunities. A majority also agree that e-journal access helps them to conduct better quality research, and that it helps to expand their research networks. Is expanded access having its intended effect? Researchers across the country agree strongly that having access to electronic journals makes them more productive as researchers – and also improves their teaching.

So, for a significant number of stakeholders – researchers and library directors – we can state with confidence that CNSLP has met its objective of fostering innovation by expanding the volume, timeliness, quality and ubiquity of STM information available to researchers, and that expanded access is improving research, teaching and networking.

## 5.2 OBJECTIVE #2 – ACCELERATE ADOPTION OF E-JOURNALS

For some time now e-journals have been acknowledged to be the wave of the future in scholarly publishing. Electronic publishing has a number of built in advantages for end users, publishers and libraries that are driving the transition. Potential advantages include speed of access; lower publishing, distribution and acquisition costs; simultaneous use of publications; and more efficient document handling and dissemination. Library administrators have long recognized that there will be an inevitable transition from print-only holdings to a mix of assets (print/electronic) and possibly in the long term, publications only being available electronically<sup>14</sup>. However, there was considerable uncertainty over the pace of change, and concern that well-endowed libraries would be in a better position to make the shift to e-journals, while other libraries would be slower to adapt.

### Library Directors - In Their Own Words

- *CNSLP has accelerated the transition to electronic-only access. We have cancelled more print in favour of online, thus recovering/avoiding dual mode costs. We have used these recaptured funds to license additional e-resources, expand user licenses and increase the number of monographs purchased. (Medical/Doctoral)*
- *A most significant and long term impact was that CNSLP accelerated and expedited the transition from print to electronic and significantly improved support for research because faculty and students had immediate access to the widest range of titles possible. I have little interest in returning to selecting journals by title and trying to second guess what faculty will need to be successful. (Comprehensive).*
- *Augmentation de la confiance du corps professoral en relation avec la revue électronique d'où un impact positif de la haute direction versus ce genre de service. (Undergraduate)*

One of CNSLP's objectives was to speed the adoption of electronic information delivery by university libraries, in a more balanced and uniform way across the country. CNSLP's contribution would be to make a core set of electronic journals equally available to all libraries. CNSLP recognized that equitable access would be a necessary condition for rapid adoption, although it would by no means be a sufficient condition. Factors other than the availability of e-

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<sup>14</sup> Many specialists do not believe that scholarly publishing will ever completely eliminate paper copies.

journals would also have a bearing on the rate at which individual libraries adopted e-journals. These other factors include, for example, computer infrastructure capabilities, staff training, and other related infrastructure modifications. Nevertheless, it was anticipated that a large supply of quality electronic publications would be a valuable impetus for change.

This study found strong confirmation that CNSLP has achieved this objective. An overwhelming number of library directors surveyed by CNSLP strongly agreed that CNSLP has allowed their library to accelerate its transition to e-journals.

Certainly, by lending financial support for the core information component, CNSLP reduced the financial risk for many universities. For others, it helped the library to make a case for additional internal support from the university.

It is not clear the extent to which CNSLP directly lowered technical risk for participating universities. Certainly, CNSLP helped to sort out technical issues with publishers' delivery systems, which in turn benefited participating universities. However, CNSLP was not intended to provide technical support directly to libraries, which have their own in-house technical resources. Although many library directors said they were satisfied with CNSLP's basic troubleshooting support, it appears that there are still a number of technical issues that need to be addressed by publishers to satisfy their library customers.

#### **Library Directors - In Their Own Words**

- *La visibilité accrue de la Bibliothèque et l'offre élargie de services ont contribué à l'obtention d'une augmentation de 50% du budget de la documentation en 2001-2002, et de 8% en 2002-2003. (Medical/Doctoral)*
- *The incentive funding made a huge difference in our ability to take advantage of CNSLP. The impact is of limited duration, however, as external funding runs out this year. Now the problem is finding sufficient funds to maintain what we acquired through CNSLP. (Comprehensive)*
- *CNSLP has certainly increased the quantity, breadth and depth of the most current research literature in our library. (Undergraduate)*

It is clear from a number of the verbatim comments received from library directors that participating in CNSLP was a motivating factor for many libraries to make additional investments in their e-journal infrastructure. In some instances this investment was welcome – particularly if additional money could be found – whereas the rapid transition to e-journals placed additional financial strain on some libraries.

It appears likely that for many libraries that had no substantive e-journal experience prior to CNSLP, that having participated in CNSLP they are better positioned to integrate future (non-CNSLP) e-journals into their library system. CNSLP no doubt

assisted many libraries to sort through the issues they would inevitably face as electronic publishing becomes the norm. Certainly, having absorbed the CNSLP experience, university libraries now have a more modern research information infrastructure than they did two or three years ago.

### 5.3 OBJECTIVE #3 - ACCELERATE THE USE OF ELECTRONIC INFORMATION

CNSLP has had clear success in accelerating the use of electronic information. Not only are researchers utilizing more e-journal resources and reading more broadly, they have also reversed their information consumption patterns - from a primary reliance on print to electronic journals. In addition, researchers reported they are able to be more productive, conduct better quality research and expand their research networks. In many instances teaching has also benefited from expanded access to e-journals.

Researchers especially appreciate the around-the-clock access they have with e-journals. They also value the overall quality and relevance of the e-journals that CNSLP has provided.

#### Library Directors - In Their Own Words

- *CNSLP provided what users are looking for – on-line, desktop access to full-text e-journals. 400 e-journals were added and cancelled titles were restored. (Medical/Doctoral)*
- *Prior to CNSLP we did not have good science and technical e-content. CNSLP has provided invaluable support to us in building an information-rich online research environment for our learners. (Comprehensive)*
- *We are a small, fairly remote university that considers faculty research a priority. Our faculty is very pleased to have local access to resources that we would never have been able to afford on our own. They had indicated that they feel better able to participate at the national level and less stressed about the journal collection and the budget. (Undergraduate)*

### 5.4 OBJECTIVE #4 - IMPROVE AFFORDABILITY

Overall, there is evidence that CNSLP's national site license model has lowered the system-level cost of journal acquisition beyond that which could have been achieved through individual university acquisition or in many instances, regional consortia acquisition. There is a very high level of agreement among library directors that the terms of the CNSLP agreements are superior to those they could have negotiated on their own or through local or regional consortia. They were also pleased with the efficiency and effectiveness of CNSLP's licensing process.

However in many respects there is no such thing as an "average" or "typical" university, and not unexpectedly, there are challenges trying to adapt a one-size-fits-all approach (i.e. national site licensing) to the situation of 64 individual and unique universities. For example, a large university might report that it had already acquired most of the CNSLP offerings, and that CNSLP's impact was therefore not financially beneficial. A small library without a large cadre of researchers in natural sciences and engineering might feel

#### Researchers - In Their Own Words

- *Immediate access to the most current articles and having them at your finger tips and having search engines such as Pub Med allows you to print out a high quality copy right away. (Medical/Doctoral)*
- *The ability to retain access to journals after the subscription runs out and text searching for all journals. (Comprehensive)*
- *The ones most critical to me were 200 miles away, but now I can remain current with my research. Save time and money, rapid access, research journal review is current. (Undergraduate)*

that the resources devoted to CNSLP could have been better spent elsewhere (e.g. social sciences and humanities).

Calculating system-wide cost reductions may presuppose that, left to fulfil their own priorities, all libraries would have chosen to acquire all the publications that CNSLP offered. That is certainly not the case. Many Comprehensive and Undergraduate universities place greater emphasis on the social sciences and humanities in their journal collections; therefore participating in CNSLP will increase their costs further as collection resources are spent on non-CNSLP titles.

Herein lies a dilemma for CNSLP and its funding sponsors. If CNSLP offered its financial support only to institutions with strong STM research activities<sup>15</sup>, it would risk discriminating against other institutions<sup>16</sup>. (In 2001, for example, 15 universities out of 65 accounted for 82% of all research at Canadian universities<sup>17</sup>.) If CNSLP offered financial support to all institutions it could risk not being relevant to their research needs, which are not predominately STM. Hence the dilemma: concentrate on the research-intensive universities and risk not meeting one group's needs, or providing resources to all and risk not being 100% relevant.

As CFI provides 40% of the total project costs, universities need to find financial support from other partners totalling 60% of costs from other partners - primarily provincial governments, federal regional development agencies and from their own internal university sources. Some institutions may feel that in the larger scheme of things the internal funding they devote to CNSLP would be better spent elsewhere. However, at the same time it is difficult to turn down 60-cent dollars so they feel compelled to participate.

What would truly help to make the national site licensing model effective and equitable is if all university research needs, whether STM or social science and humanities, could be addressed through a national site license. There is little disagreement that the national site licensing model is the most cost-effective solution to university libraries' information needs as the model is supported both by universities and by publishers. The difficulties come when trying to apply the

### Library Directors - In Their Own Words

- *Generally, the impact is marginal since the net addition of titles to our collections was not large. (Medical/Doctoral)*
- *CNSLP has provided access for \$370K which would otherwise have cost us approx. \$1.2M ... average cost/title of journals in the CNSLP package before and after was reduced from \$1500/title to \$417/title. (Medical/Doctoral)*
- *Our move to electronic journals was well-established prior to CNSLP. Hence, any administrative and budgeting changes arising out of electronic licensing can only in part be attributed to CNSLP. (Comprehensive)*
- *CNSLP e-journals are add-on titles or new subscriptions. They do not replace print subscriptions. A static acquisitions budget required us to cancel print subscriptions equivalent to increased costs. (Undergraduate)*

<sup>15</sup> Which is a condition of CFI funding.

<sup>16</sup> Also, by including a smaller number of sites in the national license, it is likely that average per-site costs would increase because the volume of the order would be smaller.

<sup>17</sup> Source: RESEARCH Infosource Inc. Canada's Top Research Universities Report, 2002.

national site licensing model in a fragmentary way – that is by using it to solve only a portion of the system’s total needs. By providing a complete universe of research materials suitable for all disciplines it would undoubtedly be easier to satisfy all libraries needs and achieve the full benefits of the national site licensing model.

A related issue concerns the flexibility of the site licenses that CNSLP negotiated. At the present time they provide an all-or-nothing mix of publications. Many institutions would welcome flexibility in their ability to choose from a “basket” of publishers’ offerings. Perhaps an arrangement where everyone committed themselves to a minimum number of publications, but could choose which specific publications from each publisher’s offerings, would be advantageous.

With these caveats in mind, as well as the constraints under which CNSLP operates, it would be fair to say that it has gone far in achieving its affordability objectives. There is little evidence that libraries want to go back to their previous modus operandi; their real concern is how to ensure that they can continue to participate in future iterations of CNSLP. What could help significantly is if universities develop a plan to utilize a substantial portion of the new funds that the federal government has allocated for the indirect costs of research, to acquiring additional national site licenses, especially in the social sciences and humanities. With its experience negotiating the STM licenses, CNSLP would be well positioned to handle further negotiations with other publishers.

## 5.5 OBJECTIVE #5 - IMPROVE EQUITY

It is clear that CNSLP has succeeded admirably on this measure. The smallest institutions have benefited most in information terms from their participation. Whereas, on average, Undergraduate institutions had access to only 89 of CNSLP’s offerings prior to 1999-2000, post CNSLP they had access to 718 publications – an increase of 737%. Comprehensive universities recorded a similar percent increase of 550%.

These striking results seem to have helped create a positive atmosphere of improved competitiveness at our smaller institutions.

Their STM researchers clearly feel they are operating on a more level playing field with their colleagues at larger universities. Whether over time these new resources affect the smaller universities’ abilities to retain and recruit staff is still to be seen. However, what can be said is that they will act as an added incentive when recruiting new faculty and researchers.

### Researchers - In Their Own Words

- *C’est d’avoir accès aux revues, parce que notre bibliothèque est petite..Rapidité d’accès aux numéros. Consultation d’indexe.* (Comprehensive)
- *They’re stupendous, as our library is limited.* (Undergraduate)
- *Having access to scientific literature that I would not have access to by paper. Having access from my office and being able to print the article, instead of going to the library to photocopy a journal.* (Undergraduate)
- *This school has a very limited library, so it would be almost impossible to conduct research without electronic journals.* (Undergraduate)

## **5.6 OBJECTIVE #6 - PRICE PREDICTABILITY AND STABILITY**

With a 3-year license in hand from 7 major publishers, CNSLP provided a welcome reprieve for libraries in terms of price predictability and stability – certainly for the duration of the license. One library director said it best when they reported, *“Amount paid to CNSLP is/was predictable during the life of the agreement. Coming out of the agreement maximum renewal rates can be calculated”* (Medical/Doctoral).

Prior to CNSLP, unpredictable price increases from publishers were playing havoc with universities’ ability to budget for knowledge resources. There was a constant scramble to find money to pay for surprise cost increases. In many instances libraries were forced to drop publications if funds could not be found. This situation was as vexing to university administrators as it was to librarians. The licenses that CNSLP secured with key publishers provided “breathing space,” and allowed administrators and librarians to accomplish content growth through stable and predictable pricing.

## **5.7 OTHER CONCLUSIONS**

Information collected from researchers and library directors provides strong validation for the CNSLP site licensing model and for how the CNSLP administration has implemented the model. By expanding the volume, timeliness, quality and ubiquity of STM information resources, CNSLP has had a major impact on the national research scene. It has advanced the adoption of electronic information delivery at many universities, and has also accelerated the use of electronic information by university researchers. CNSLP has improved affordability, and achieved economies-of-scale in the range and cost of electronic information licensing at the national and institutional levels. By offering a large and consistent set of e-journals to all university libraries, it has greatly improved the access of researchers at smaller institutions to electronic information. And lastly, CNSLP has certainly introduced an element of price predictability and stability that is appreciated by many libraries.

As much as library directors and researchers appreciate and value CNSLP, they also point out that it has not been a panacea for their problems. There is an enormous variation among the needs and resources of university libraries, and thus for the value they derive from CNSLP. CNSLP was conceived as a means of providing support for university research, but was limited to the fields of science, technology, environment and medicine. Universities that do not have strong research efforts in these disciplines naturally feel they derive less value from CNSLP than those that do.

Some institutions pointed out that welcome as it is, CNSLP accounts for a comparatively small portion of their holdings, and therefore has only marginal impact. For example, one large university library indicates that the 718 CNSLP titles comprise a small portion of the 12,000 titles it collects. In contrast, an Undergraduate university reports *“We rely entirely on CNSLP for our science and technology journals and do not subscribe to any separately”*. Other libraries find themselves somewhere between the two extremes. One library stated *“With only 7 licenses, it is hard to agree strongly with most of the above (cost savings). The potential for high impact is very strong, but we need more content to make a really strong case”* (Comprehensive). Similar differences can be found in the libraries’ response to many of the issues tested in our research, depending on the size of the university, its relative emphasis on STM research, and its electronic document experience and capabilities prior to CNSLP.

Aside from the different e-journals that CNSLP offers to libraries, it also negotiated to pay for a number of ancillary information projects, such as Web of Science. Library directors report that researchers welcome these value-added information products.

A number of library directors believe that their needs were sometimes being overlooked but that CNSLP helped to raise the profile of the library and its needs among senior administration. They made comments such as *“Recognition of the importance of the CNSLP endeavour was reflected in the university administration’s support for the project with additional monies”* (Undergraduate) and *“CNSLP had a high profile with our university administration; their philosophical support aided in the transition to financing e-only journals”* (Medical/Doctoral).

Significant differences among universities were also found when questions of cost and administrative savings were raised. One library said *“High impact due to additional costs. While the increased value is substantial, overall we have increased costs. This is coupled with substantial increased content as well. Many efficiencies realized through the CNSLP administration of this project”* (Undergraduate). Another university said *“I am setting aside the initial 3 years and initial deals of CNSLP which for our library was completely funded with other people’s money. The savings from print cancellation for those years are being used to fund years 4 and 5 of CNSLP. So, overall, the financial impact of those years is neutral”* (Medical/Doctoral). Finally, a third university said *“By joining CNSLP we were able to afford many more e-journals at a fraction of the regular cost. This allowed us to get other e-resources with our budget”* (Medical/Doctoral). These varying responses point out once again the difficulty of uniformly attributing the benefits and costs of a project such as CNSLP to 64 unique institutions.

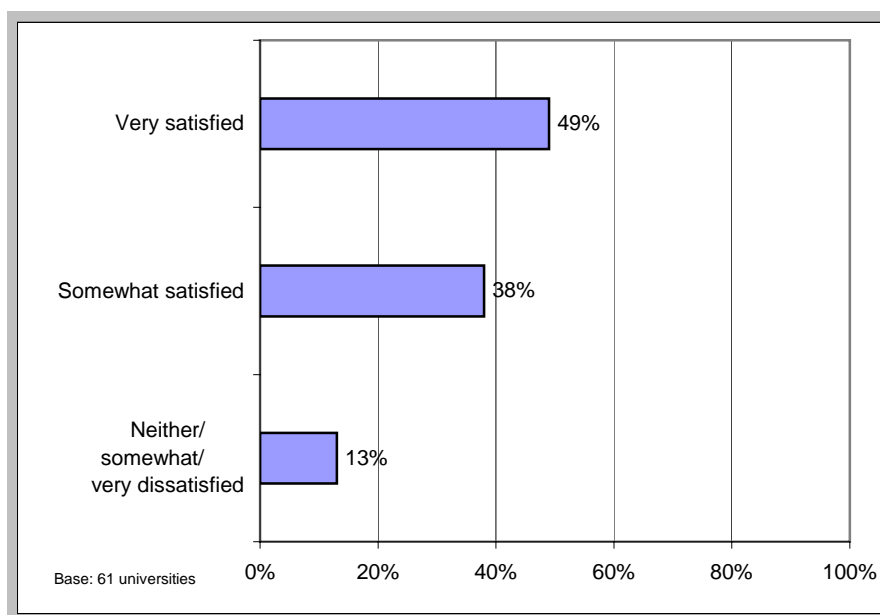
What do university libraries feel about the worth of CNSLP? The following comments make it clear that the majority of libraries have faith in the CNSLP model and its administration.

### Library Directors - In Their Own Words

- *CNSLP has been a catalyst for reversing a trendline from spending more each year for fewer titles to spending the same or less for more titles. CNSLP has demonstrated the power of a national purchasing approach in terms of pricing and licensing. Canadian libraries need to continue to pool their acquisition dollars through CNSLP to maximize purchasing power. Current infrastructure should be expanded to include more institutions, wider range of e-resources. (Medical/Doctoral)*
- *For the first time in decades, librarians, through CNSLP were able to influence STM publishers and make them accountable to us the customers. Instead of passively responding to publisher strategic positions we set the strategic agenda. Canadians were world leaders in using consortia and a united business approach to gain our objectives. Despite some limitations in the final outcomes, the CNSLP approach deserves great credit and much thanks for a job well done. (Medical/Doctoral)*
- *Congratulations on a job well done particularly the model license. Please continue this valuable project. We are just beginning to see its impact. If we stop now, the time and energy put in already will be wasted. (Undergraduate)*

Perhaps the single best indicator of CNSLP's impact and success can be found in library directors' overall satisfaction ratings. Library directors gave high marks to the organization in spite of the many challenges that CNSLP, its member libraries and vendors needed to overcome in establishing and implementing the landmark national site license agreement. When asked to indicate how satisfied they were overall with their participation in CNSLP, they gave a strong show of support.

**Exhibit 5.1 Overall Satisfaction with CNSLP Participation  
Total Universities**



\*Based on a 5 point scale where "5"=very satisfied and "1"=very dissatisfied

A number of items are clearly driving the high levels of satisfaction. A majority of libraries are much more satisfied with the *range of e-journals* now available to them. (This mirrors researchers' satisfaction.) Satisfaction is also high with the *quality of the journals* supplied, and therefore, with the *quality of the service libraries are able to offer to their users*, as well as with the *value for money* that CNSLP's licensing agreements offer to their member libraries.

As we found earlier, although libraries are pleased overall with the *relevance of the e-journals supplied by CNSLP*, it appears that libraries would like to see the licensing model extended to non-STM disciplines, especially in the social sciences and humanities, disciplines in which the majority of university teachers practice.

## **5.8 A FINAL WORD**

CNSLP's most important impact may lie not in the details of its activities, outputs and impacts (important as these are), but rather in the spirit of cooperation that CNSLP fostered among 64 universities, 11 governments and other sponsors and supporters. For the first time, university libraries and administrators and their partners and stakeholders came together to effectively tackle a national challenge. The CNSLP experience makes it possible for the community to move forward and together embrace the future opportunities that new technologies and new business models are offering. CNSLP has given its members the confidence and the experience they need to embrace change. CNSLP has set a high standard and there is no looking back; the future path of university libraries is now firmly set.

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**Appendix: Evaluation Framework**