



SCIS

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SCHOOLS CATALOGUE INFORMATION SERVICE

connections

Forging Future Directions: Towards a Preferred Future

In this issue...

Welcome to 2002	2
<i>Connections</i>	2
<i>SCISWeb</i> Handy Hints	3
Link Checking	3
Learning for the Future: Worth the Involvement	4
SCIS Cataloguing: Policy and Practice	4
CC News	5
SCIS: Curriculum-Related Electronic Resources in Schools Survey 2001	7
An Online Thesaurus for Australian Schools	8
Internetting Corner	9
Resources	10
<i>SCISWeb</i> Testimonial	10
The School Intranet: Making Schools Even More Resourceful	12
<i>SCISWeb</i> Testimonial	12
Making Connections: The Role of the Teacher Librarian in the Information Age	13
Cataloguing and Database News	15

The seventeenth biennial conference of the Australian School Library Association (ASLA) was held on the Sunshine Coast, Queensland in October 2001. The conference theme 'Forging Future Directions' was the catalyst for participants and presenters to think and strategise for a 'preferred future' (Peter Ellyard). SCIS was pleased to be involved with this stimulating conference. SCIS supported the conference by providing assistance to ASLA, notably sponsoring Dr Ross Todd for the SCIS oration.

The keynote addresses set the scene for each day with participants being challenged to consider these issues:

- Can we, as school educators and information professionals, achieve the seemingly impossible? No, if we think and believe that it is impossible. (Ross Todd)
- How can we create a planetist future? What does this mean to an educator? (Peter Ellyard)
- Where can technology take us as educators? (Roy Lundin)
- How can we develop student learning programs that include a range of literacies and allow for a range of learning styles? (Joanne La Fortey)

The concurrent sessions enriched the keynotes for each day by developing a range of topics that helped to crystallise the challenges.

Topics

Knowledge management

A variety of perspectives were offered on this topic from how to use technology effectively to manage knowledge acquisition through to using constructivist learning philosophy as a basis for knowledge construction. The infrastructure for this to occur includes collaborative and interactive technologies as well as changes in the paradigm of teaching.

The emphasis within this topic area is on learning within an existing organisational culture that allows learners the flexibility to grow and change. Todd quotes the author N. Hill (1883–1970):

First comes thought; then comes organisation of that thought into ideas and plans; the transformation of those plans into reality. The beginning, as you will observe, is in your imagination.

Learning

This topic examined learning outcomes and their relationship to information literacy and developing teaching strategies to support this, placing learning as the central focus of what we do and making administrative details secondary in what we do.

Image and perception of self as a professional

The challenges provided not only require Teacher Librarians as educators to upskill and develop enhanced curriculum, they also require educators to consider their image and to start

continued on page 5

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Welcome to 2002

SCIS was born as the Australian Schools Catalogue Information Service (ASCIS) in 1984. It has provided 18 years of service to Australian schools, responding to the changing needs of school libraries. I have in my museum drawer a history of technology as exemplified by SCIS: some catalogue cards, a microfiche (but alas not a microfiche reader), some funny-sized discs that won't fit in my computer, some smaller disks, a CD-ROM, the original SCISLink online software, and the *SCISWeb* URL. There's a thesis in there somewhere.

In this spirit of continuous improvement, during 2001 we commissioned an Information System Review to identify existing and potential system requirements for the administration and provision of the SCIS service. The Review sought feedback from key users and stakeholders. It showed that the service is performing fundamentally well technically (especially with regard to the Voyager Integrated Library Management system and database integrity), but that there is opportunity for improvement by providing a seamless, fully integrated service – moving from a product base to a total service concept.

The total service concept would consolidate existing products (*SCISWeb*, *SCIS Authority Files*, *SCIS Subject Headings/Thesaurus*) and services (*Connections*, SCIS website, support desk, database management, thesaurus management, etc) into an integrated online environment. During 2002 we will explore this concept further.

The demand for SCIS continues to grow. In 2001 about 5.6 million records were downloaded from *SCISWeb* and *SCISCD*, a significant increase on the 4 million

in 2000. Users are steadily moving away from *SCISCD* and towards *SCISWeb*, with a 13 per cent reduction in the number of *SCISCD* users from 2000 to 2001.

A significant development for SCIS late in 2001 was the signing of a Memorandum of Understanding with the National Library of New Zealand (NLNZ), to cooperate in the introduction and implementation of *SCISWeb* to New Zealand schools. NLNZ is responsible for school libraries in New Zealand, and has a strategic commitment to 'ensuring that all New Zealand Schools have tools to use and manage information effectively in support of the teaching of the New Zealand curriculum by 2003'. They see SCIS as assisting schools in this aim. Work is underway to market SCIS to New Zealand schools, to support the NLNZ library advisers in school services centres, to liaise with library system vendors, and to ensure that the SCIS subject headings are appropriate for New Zealand schools – 2002 will be a big year for SCIS in New Zealand.

During 2001 the SCIS Unit successfully completed the inaugural survey of school library holdings for the Educational Lending Right (ELR) scheme, on behalf of the Department of Communications, Information Technology and the Arts. In 2002 SCIS will continue with the annual survey on behalf of the Department. I would like to thank the schools and library system vendors who participated in the survey in 2001 – their cooperation was much appreciated.

The *SCIS Authority Files* product was launched late in 2000 and achieved sales of 2,600 in 2001. We would expect more schools to take advantage of the time saving benefits of *SCIS Authority Files* and subscribe to the product in 2002.

One of the strategic goals set by the Curriculum Corporation Board is to consolidate the *SCIS Subject Headings* as the primary controlled vocabulary for resource discovery for Australasian schools. During 2001 the *SCIS Subject Headings* were selected as the controlled vocabulary for the subject element in the EdNA Metadata Standard, and as the basis for a *Schools Online Thesaurus* for Australian school online services. The new *Schools Online Thesaurus (ScOT)* is being developed in conjunction with education.au limited (which manages EdNA Online), and in consultation with all states, territories, the Commonwealth and Catholic and independent sectors. *ScOT* will be used by The Learning Federation, EdNA Online, and by state and territory education portals. Its use by schools is being explored.

As part of the transition to *ScOT*, the *SCIS Subject Headings* are being reviewed in areas such as compound headings, inverted headings, and headings that can be created by the cataloguer. Work is also underway on policies, principles and procedures for *ScOT*, interoperability standards, and a workflow process for updating *ScOT*. For the latter, a more streamlined process for receiving and processing proposals for new or changed headings is being developed. These will be completed in early 2002, in preparation for the fifth edition of the subject headings list.

As well as the online version of *ScOT*, SCIS will continue to publish the printed version of the subject headings list, and *SCIS Subject Headings Fifth Edition* will be published during 2002. It will contain a number of improvements over the fourth edition.

The SCIS team for 2002 remains largely unchanged: Tricia Nathan (Marketing,

continued on page 3

Connections

Connections is a quarterly newsletter produced by the Schools Catalogue Information Service (SCIS), a business unit of Curriculum Corporation. SCIS is committed to publishing informative and useful material for the benefit of library staff in schools. Our focus is on helping library professionals keep abreast of the latest in information services and information technology relevant to school libraries.

Connections is distributed free of charge to all schools in Australia and New Zealand.

Connections contributions

SCIS welcome submissions for work or articles to be published in future issues of *Connections*. Of interest are articles that may relate to the management of information or resource management in schools.

Length

Articles may range in length from 500 to 1500 words, however work outside these specifications will be considered.

Submissions

Contributions and correspondence are welcome and should be forwarded to <scisinfo@curriculum.edu.au>. Please include contact details.

Connections online

<<http://www.curriculum.edu.au/scis/connect/connect.htm>>.

SCISWeb Handy Hints

1. **New frequently asked questions**

Cataloguing FAQs (frequently asked questions) can be located in *Cataloguing and Database News* at <<http://www.curriculum.edu.au/scis/database/catfaqs.htm>>. There is also a detailed explanation of the standards and conventions underpinning the use and display of punctuation in subject headings. More FAQs will be added during the year.

This section currently has the answers to:

- How do I catalogue a DVD? (Includes an example of a record from the SCIS database.)
- Which GMDs does SCIS use?

2. **Correcting URLs on SCIS website catalogue records**

A weekly list of URL errors in SCIS website catalogue records is generated using the 'Voyager URL Checker System'. Many of the

errors reported are temporary ones, but in some cases the links have changed and need to be corrected on the SCIS database. Sometimes the details and even the coverage of the website have changed so the records may need to be deleted from the database.

The SCIS database now contains over 2,500 website catalogue records. SCIS staff are working with the cataloguing agencies to streamline the processes for keeping these records up-to-date. We are investigating ways of notifying customers of updated URLs. If you have downloaded a SCIS website record and find that the link is no longer working, try searching for the record again in *SCIS OPAC* (as the link may have been updated), or email <catinfo@curriculum.edu.au> with the details.

3. **Connection problems on SCISWeb**

If you are experiencing problems accessing

SCISWeb we recommend you check the settings in your browser cache.

In Netscape Communicator version 4 they are located on the top menu bar. Select *Edit* then *Preferences*. Double click on *Advanced* then select *Cache*. Ensure your *Document in cache is compared to document on network* setting equals 'Once per session'. In Internet Explorer version 5 they are located on the top menu bar. Select *Tools* then *Internet Options*. Select the *General* tab then click on *Settings*. Ensure your *Check for newer versions of stored pages* setting equals 'Every time you start Internet Explorer'. Please note that changed settings will not be activated until you have rebooted.

Correct settings ensure that a new version of *SCISWeb* is delivered to your computer at the beginning of that browser session. All subsequent appearances in that session will be retrieved from the temporary computer cache.

Link Checking

How many times have you clicked on a link on a web page only to get the dreaded page 'HTTP 404 Page not found'? Dead links or broken links detract from the usefulness of the web as a reliable information resource.

If you manage a website, or hold a collection of URL links in your library system for reference by patrons, it is important to regularly run a check to validate that those resources are still available and/or still appropriate.

Most Web Editor packages now include an option to validate local and remote links. The software will check your local site, which exists as a collection of web pages and images on your organisation's server disk drive, to see if you have moved a file or folder. For remote sites they run a mini web browser which is able to open a web page from the Internet, read it, locate any links, and follow those links. If you don't have access to your web server's hard drive, you may have to check your own website as if it was a remote site.

While this process sounds simple, there are a few problems and some potential risks. The software should:

- have configuration options similar to your browser – to be able to use PROXY settings and gateways
- be able to be limited to only a certain number of levels of checking (eg folders and files) otherwise it may run for extended times
- limit the speed at which it hits the servers to minimise network traffic and load.

Finally, remember that the software is only checking to see if the page exists. It cannot check to see if the content is still valid for the reference you have – only you can do that.

As mentioned, most current web authoring software packages support link checking although you have to run the particular option to start the checking. If, however, you have access to your own web server (a Linux, Unix or NT server) there are many free-ware and share-ware packages you can install and schedule to run unattended or on a routine basis.

*Graeme Williams
Manager, Information Technology
Curriculum Corporation*

Welcome to 2002 (cont.)

Customer Support, Client Relations), Jenny Baran (Customer Support, Client Relations), Leonie Bourke (Voyager System Support, Cataloguing, Special Projects) and Steven Haby (Subject Headings/Thesaurus, Cataloguing and Metadata). Elaine Jeffree and Ester Csaky continue in a part time role to assist Customer Support and Marketing. We welcomed Bridie Mackay as a permanent member of the team. Bridie has worked on a temporary basis with SCIS and is now responsible for the ELR project and works on other special projects. Natasha Kuyken joined the Customer Support team in April on a full-time basis. Ellie Tuncel and Ray Cotsell have joined the cataloguing team on a part-time basis. We were sorry to lose Jan Matthews at the end of 2001 who left to take up a position in a real library. She brought a strategic vision to the product development and technical support role. The position has been filled by Anne Camfield from CSIRO who will be the new Information Services Manager focusing on product development and technical support. My thanks to the SCIS team who continue to achieve significant outcomes, and who have a challenging year in front of them!

Keith Gove, General Manager, Curriculum Operations, Curriculum Corporation

Learning for the Future: Worth the Involvement

Leonie Dyason, Teacher Librarian at Mooroopna Secondary College, Victoria, reflects on her experience as a member of the Australian School Library Association (ASLA) and the Australian Library and Information Association (ALIA) *Learning for the Future* Reference Group.

I recall the August day that I foolishly volunteered to represent the School Library Association of Victoria (SLAV) on the *Learning for the Future* Reference Group. Did I know what this voluntary group would require? Definitely not! Do I regret this involvement? Definitely not!

Membership of this reference group with its representatives from all state associations and from the ALIA has been a wonderful opportunity for personal and professional skill development. I have learnt so much about libraries across all school sectors and about curriculum variations, support and styles and directions of school library services in each of the states. I have 'met' some very dedicated Teacher Librarians. What a great way to climb the learning curve!

Special mention must be made of the group's convenor, Western Australia School Library Association's (WASLA) Pru Mitchell, who

used both persistence and technology to allow us to share our ideas and approach the common issues that are not constrained by geography.

My particular responsibility in the research and writing process was that of 'staffing'. Working with Kris Johnstone (ALIA) was both a wonderful and complicated experience. As we discussed the different roles within our libraries, we shared dreams, possibilities and realities. The consultation process with the SLAV membership however, kept us on track and ensured that we were confident of the relevance and accuracy of the content of our allocated chapter.

You will notice many changes in the format of this edition of *Learning for the Future: Developing information services in schools (Second Edition)*. Working nationally meant that interesting conversations about terminology often arose with information and communication technology (ICT) meaning different things in each state. Necessary compromises were debated long and hard until we progressed beyond email overload to a stage where a final edit was required to pull the publication together. June Wall (ASLA President) admirably carried out this task and, despite a few editing and printing hitches, I highly commend the final result to you. *Learning for the Future: Developing information services in schools (Second Edition)* is an impressive and useful resource

that can be used throughout Australia to establish benchmarks and promote the value of school libraries.

After working on this collaborative effort, I'm sure that the idea of going solo and writing 'that (hopefully best selling) novel' now seems far less challenging to all members of the reference group!

Keep up the good work that is happening in school libraries all over Australia, use the support and ideas that abound in this publication and take the opportunity to be involved in your local association when you can. It's well worth it!

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Learning for the Future: Developing information services in schools (Second Edition)

Author: Australian School Library Association and Australian Library & Information Association

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Publisher: Curriculum Corporation 2001

SCIS Cataloguing: Policy and Practice

Introduction

Generally, it is the policy of SCIS to follow internationally accepted standards for the cataloguing of curriculum resources for school libraries. In order for SCIS bibliographic records to be suitable for use by other user groups, and for the maintenance of consistency and quality, SCIS aims to follow existing international standards as laid down in:

Descriptive cataloguing: *Anglo-American Cataloguing Rules* (2nd edition, 1998 revision)

Classification: *Dewey Decimal Classification and Relative Index* (21st edition DDC21)

Abridged Dewey Decimal Classification and Relative Index (13th edition, ADDC13)

Subject cataloguing: *SCIS Subject Headings*

There are, however, some variations to the standards used in descriptive cataloguing and classification, which you may have noticed in SCIS catalogue records. Where there are variations, these have been kept to a minimum and they have been made with the particular needs of SCIS users in mind.

SCIS Subject Headings is an example of a product which has been developed especially for Australasian students and teachers. Subject headings are continually updated in order to

keep up with the changing curriculum resources in schools.

In response to the specific needs of schools, SCIS has commenced the cataloguing of websites. Only those websites that have been through a quality control mechanism, such as reviews by Departments of Education, are catalogued.

Another example of SCIS responding to the requests of schools is seen in the addition of a *Table of contents* note. This note is used for general works that contain specific topics in chapter headings. This may be useful for students and staff wishing to access specific

1. Tell us about your library

We would like to include a regular feature about library staff and their school libraries in *Connections*. If you are interested in promoting your library please forward 200–500 words to SCIS by email at <scisinfo@curriculum.edu.au>. This will place you in a draw to win a \$100.00 voucher for Curriculum Corporation products. There will be three lucky winners. If you are not selected as a winner in the first draw you will be eligible for future draws in 2002. Article submission deadlines for 2002

Connections:

- Issue 41 – 1 March
- Issue 42 – 10 May
- Issue 43 – 9 August

2. The Digital Information Literacy Project

This project is designed to provide high quality, 'just-in-time' professional develop-

ment for Teacher Librarians in Victoria who either lack professional qualifications, or who are returning to the profession after a period of absence. Professional Development will be delivered via professional networks at both school and regional level, as well as online. A mentoring network will provide the opportunity for leadership roles within the project for experienced Teacher Librarians, who will be offered Professional Development to support their role. For further information contact: Katrina Beard (Curriculum Initiatives Branch) on: Tel: 61 3 9637 2153, Email: <beard.katrina.av@edumail.vic.gov.au>.

3. Listserv

Staff in school libraries who are familiar with the Australian Teacher Librarians listserv, OZTL_NET may be interested in subscribing to other listservs. Schoollib, located at <<http://www.vuw.ac.nz/dlis/ssubul/currawar/ediscgp.htm#>>

lists library oriented listservs in New Zealand. New staff to school libraries wishing to subscribe to OZTL_NET should contact Lyn Hay on Tel: 61 2 6933 2808, Email: <lhay@csu.edu.au>.

4. LIANZA Conference 2002

Information about the LIANZA Conference 2002 is located at <<http://www.confer.co.nz/lianza2002>>. Other conference information for 2002 can be located on the SCIS website at <<http://www.curriculum.edu.au/scis/links/libconf.htm>>. Please advise SCIS of upcoming conferences not already on this list.

Forging Future Directions: Towards a Preferred Future (cont.)

with the essential defining question, as Rosalind Kentwell (Teacher Librarian, Melbourne High School) suggested 'Who am I?' Beliefs about who we are inform how we behave and act in teaching and learning environments. These beliefs also suggest the need to consider 'how do we want to be perceived?' The answers to these questions create the basis for how we develop learning activities and design learning environments.

Information literacy

Many sessions re-visited what information literacy (IL) means and how the concept of IL has broadened to include critical literacies and information and communication technology (ICT) literacy. Workshops were held on the new edition of *Learning for the Future: Developing information services in schools (Second Edition)* that provides an IL and ICT learning matrix as well as other resources for whole school development.

Leadership

This topic was explicitly covered in a number of sessions, however it was an underlying

theme of many others: being leading learners; being leaders of staff; examining the qualities of good leadership and how these impact on developing life-long learners.

Personal development in this area was available by considering a range of techniques and strategies and how these assist Teacher Librarians as leaders.

Sandra Ryan and Vicki Hudson (Teacher Librarians, Santa Maria College, Northcote, Victoria) discussed the role of understanding the characteristics of leaders and how this affects designing learning for students. They used J. M. Spinks and B. J. Caldwell, *Leading the self-managing school* (1992) and their four facets of the role of a transformational leader to develop learning programs. The four facets are: cultural leadership; strategic leadership; educational leadership; and responsive leadership.

The future

Putting all these topics together allowed participants to concentrate on specific strands within the conference – I have not even mentioned the children's literature sessions! Being able to synthesise information and

construct new meaning from sometimes disparate topics and create great teaching and learning activities is, after all, what makes a good teacher.

Using these topics and challenges can provide us with a learning map professionally to lead us into a new century.

As is widely known, conferences are great for professional networking and this one was only slightly different – the networking was overlaid with constructive discussion on where the profession of Teacher Librarianship is headed, based on how we want it to be!

June Wall is President of the Australian School Library Association (ASLA).

The article with bibliography appears in the online version of *Connections 40* at <<http://www.curriculum.edu.au/scis/connect/cnetw01/cnet40in.htm>>.

SCIS Cataloguing: Policy and Practice (cont.)

topics through keyword searching; for example, a general book on science may be given the following note:

Table of contents includes: Astronomy, Chemistry, Biology, Physics.

Outlined below are some SCIS variations and policies, in regard to subject cataloguing, classification and descriptive cataloguing.

Subject cataloguing

Where multiple subject headings can be assigned to a work, SCIS limits the number of headings to ten. No particular order is prescribed in which tracings are listed.

Works in languages other than English, both fiction and non-fiction, are assigned a language heading, in addition to other relevant headings, eg Italian language text. This language heading precedes any other heading assigned.

Genre headings are assigned to works of fiction. Only genre headings from the list in *SCIS Subject Headings* are to be used. Scope notes are included in the list.

Classification

SCIS follows the schedules in DDC21 and ADDC13, apart from some exceptions.

Table 2

When adding from Table 2, in classes other than history and geography, SCIS adds only the notation for the country and not its state or regional subdivisions, for all countries except Australia and New Zealand, eg a work on paintings of San Francisco: 759.13, not 759.19461.

Table 3C

SCIS does not use Table 3C, as the subdivision of individual literatures allowed for in this table is more detailed than required.

A820

In order to distinguish English language literature of Australia, the initial letter A is used, eg Australian drama A822.

NZ820

In order to distinguish English language literature of New Zealand, the initial letters NZ are used, eg New Zealand poetry NZ821.

298

To give emphasis and a shorter number to religion and mythology of Australian Aboriginal peoples, the permanently

unassigned number 298 is used with both ADDC13 and DDC21.

Fiction

F is used for all works of prose fiction regardless of language.

Readers

SCIS policy is to class individual readers in F or the appropriate Dewey classification, rather than in 428.6. However, sets of readers and teacher's guides are classed in 428.6.

Bilingual dictionaries

SCIS policy is to class bilingual dictionaries, where English is one of the languages, with the other language, eg an English–German, German–English dictionary is classed in 433. Also, SCIS prefers to class bilingual dictionaries with entry words in one language only with the language other than English; for example, an English–French dictionary is classed in 443, not 423.

Picture story books

Most picture story books are classed as Fiction. However, picture book folktales are classed in 398.2, traditional nursery rhymes are classed in 398.8, and stories in rhyme and pictures are given the classification for the poetry of the specific literature, eg 821. Picture story books which tell a story without words are classed at F, but simple picture books, with or without text, which are about specific topics or concepts, are classed at the appropriate Dewey number.

Descriptive cataloguing

There are a number of options to various rules in Anglo–American Cataloguing Rules (AACR2, 1998 revision). SCIS does not follow options, unless otherwise stated. If options are applied, they are applied in all chapters, in order to be consistent. Following are some examples of SCIS decisions on options from AACR2:

Rule 1.1C

- SCIS applies the option, using a general material designation (GMD) from List 2. Note, however, the addition of the term activity card.
- SCIS does not use text as resources are assumed to be text, unless otherwise stated.
- SCIS uses computer software in place of computer file.
- SCIS uses website for website records.

Note: When giving the physical description for sound recordings, motion pictures and video recordings and computer software, the specific term is omitted from the specific material designation, as the use of the GMD already indicates the type of material, eg 1 cassette, not 1 videocassette.

Rule 1.1F5

When a statement of responsibility names more than three persons or corporate bodies with the same degree of responsibility, only the first named person or body is given. The omission of the other names is indicated by the mark of omission '...' and the addition of 'and others' in square brackets. SCIS does not use 'et al'.

Rule 1.1F6

Subsequent statements of responsibility are recorded for those persons or corporate bodies who have contributed to the intellectual nature of the work, eg editors and translators. SCIS does not record subsequent statements of responsibility referring to those who have not contributed to the intellectual content of the work, eg writers of forewords, consultants, book designers, editorial supervisors and production managers.

Rule 1.4C3

- For the place of publication for Australian publications, SCIS does not add the name of the state if the name of the place is a capital city or a suburb incorporating the name of a capital city, eg West Perth, North Sydney.
- For British publications, SCIS does not add the name of the county to the name of the place.
- For United States publications, SCIS adds the name of the state, county, etc only if the chief source of information does so.

The author of this article, Mavis Heffernan, is Head Cataloguer with the Statewide School Library Support Centre, the Victorian SCIS cataloguing agency located at 150 Palmerston St, Carlton, VIC., Tel: 61 3 9349 3019, Fax: 61 3 9349 4428, Email: <heffernan.mavis.l@edumail.vic.gov.au>.

Note: Teacher Librarians from all schools in Victoria are encouraged to send resources to Mavis Heffernan at the Victorian agency if they are unable to locate them on *SCISWeb*.

SCIS: Curriculum-Related Electronic Resources in Schools Survey 2001

In 2001, SCIS conducted the Curriculum-Related Electronic Resources in Schools Survey. The results of this survey will enable SCIS to provide enhanced products and services to schools in the future. The survey encompassed Australian and International schools; primary and secondary, government, non-government, Catholic and independent schools in rural, urban and remote areas. Almost 1000 responses were received.

The survey covered a number of areas discussed in more detail below:

- curriculum-related electronic resources in schools
- managing access to curriculum-related resources within the school
- future plans for curriculum-related electronic resources within the school.

The survey also covered the role of SCIS with curriculum-related electronic resources.

Curriculum-related electronic resources in schools

This section of the survey sought to identify the types of curriculum-related electronic resources currently used in schools and their associated access and mechanisms.

The survey showed that the majority of schools preferred the term *electronic resources* to describe resources delivered by a computer. All of the respondents had an automated library system within their school. Some 43 per cent of schools had access to their library's catalogue via the school's Intranet with the remainder having access only from within the library.

Virtually every school that responded had a CD-ROM collection with 70 per cent of respondents planning to purchase further CD-ROMs. However, the survey showed that there is a growing trend (33 per cent) towards purchasing online subscriptions due to the problems associated with CD-ROM use.

Many respondents claimed that CD-ROMs were largely under-utilised and in many cases quickly dated. There were problems associated with the installation, storage and maintenance of CD-ROMs on the school network. Licensing issues and associated costs were a major concern by almost all. Students tended to prefer the immediacy of online products. The only resources that were found to be still popular, and in some cases preferred in the CD-ROM format, included encyclopaedias, dictionaries, interactive games and simulations.

The survey revealed some interesting trends of preferred formats for online resources and services. The free online services were preferred in almost all cases, specifically in the following categories: electronic journals, electronic books, reference databases, other library catalogues, telephone directories, book and media review databases. Only in the categories of newspaper indexes and abstracting-databases were the paid online resources the preferred option. Schools preferred to purchase CD-ROM encyclopaedias rather than use an online alternative. Almost a third of schools subscribed to electronic journals.

Networking and Internet connectivity

Almost two-thirds of the schools surveyed (63 per cent) were linked into a wide area network (WAN) with dedicated lines, thus allowing high quality Internet access. However, 24 per cent of the respondents had other means of Internet connection; 3 per cent of respondents were planning to link into a wide area network and 10 per cent were unaware of the school network set-up. The survey showed that 57 per cent of respondents had adequate Internet access while 40 per cent had intermittent access.

Approximately 80 per cent of school libraries were part of a school network and 52 per cent had their own local area network. Some 20 per cent of respondents provided remote access to their school based electronic resources. The fact that 15 per cent were planning to provide remote access in the future suggests that there is a growing interest and demand in the provision of this service.

Managing access to curriculum-related electronic resources within the school

This section explored the nature of responsibilities for curriculum-related electronic resources within the school and how these resources are organised.

In slightly more than half of the schools surveyed the committee responsibility for curriculum-related electronic resources was the Information Technology Committee. In other schools, it was a combination of Teacher Librarians, the Information Technology Committee and the Curriculum Committee that held this responsibility. In less than half of the schools surveyed (43 per cent) there was no single person with overall responsibility for curriculum-related electronic resources. In the other 57 per cent of cases it was mostly the responsibility of

the Information Technology Coordinator and to a lesser degree the Teacher Librarian, the Principal and/or a combination of the above.

Teacher Librarians were shown to have a major role in the management of the school's curriculum-related electronic resources, specifically in the selection, maintenance, facilitating access to resources and, to a minor degree, being in an advisory and training role to staff and various faculties.

Communication and liaison varied considerably from school to school. For some, good communication meant being involved, being on the relevant committees and simply being 'friendly' with the IT staff. Clearly it pays to be in close contact with people on the right committees. Most small sized schools had few if any communication problems with many staff regularly able to interact freely in the lunchroom. This was rarely the case for many large schools where communicating with other departments involved more effort and formal meetings. Effective communication appeared to be experienced by those most willing to go the 'extra mile' to foster good working relations with their fellow staff. Schools still being developed or schools undergoing role changes were unable to comment on this question.

Lack of time was regularly mentioned as a barrier to good communication and liaison. One respondent wrote, 'no time is timetabled for liaison'.

Many Teacher Librarians felt communication problems stemmed from other departments not understanding or realising the potential of the library to offer quality support to the curriculum. Here, lack of communication was due to lack of knowledge of what the library could offer. For example, Teacher Librarians were seen by many as a resource to be accessed *after* planning rather than *prior* to planning. In turn, often resources purchased by other staff for the library were either inappropriate or not needed. In some schools the Principal alone made decisions involved with curriculum-related electronic resources.

The library's relationship with Information Technology staff varied considerably from school to school. Many Teacher Librarians with good information technology skills often felt under-utilised. Others with very little information technology knowledge felt they needed more support than they were currently

An Online Thesaurus for Australian Schools

Steven Haby is Manager, Metadata Initiatives at the SCIS Unit, Curriculum Corporation. Steven is responsible for the management of the *SCIS Subject Headings* and is Project Manager for the *Schools Online Thesaurus (ScOT)* currently under development.

This article first appeared in *FYI* Volume 5, Number 4, Spring 2001.

Introduction

In January 2001, the Prime Minister announced *Backing Australia's Ability: Innovative Action Plan* that sees \$34.1 million over five years committed to the Schools Online Curriculum Content Initiative (SOCCI) which is known as The Le@rning Federation. All states and territories contributed another \$34.1 million to the project. This project will see the establishment of online curriculum content for use in schools which will enable teachers in all states and territories to assemble learning objects housed on a database for use within their classroom. These objects will be indexed using the EdNA Metadata Standard and subject access will be through a controlled vocabulary based on the *SCIS Subject Headings – Schools Online Thesaurus (ScOT)*.

Metadata is now widely accepted as a means of effectively indexing or describing websites and their content. Watson (2000) argues that the consistent use of metadata provides a solution to the vast number of resources available on the Internet and, when used effectively, has the potential to save users time in finding resources on the Internet. In other words, metadata acts like a library catalogue with agreed standards such as the EdNA Metadata Standard or Dublin Core providing guidance and scope in much the same way as USMARC and AACR2.

The need for a controlled vocabulary

In order to retrieve data indexed using metadata there has been an increasing realisation that a robust controlled vocabulary is required. The Dublin Core Metadata Initiative (1999) states that the DC.Subject element is used to describe the topic of the

resource. The subject can be expressed as keywords but it is recommended that a controlled vocabulary be used to select terms. Keywords are easy to apply but do not allow consistency in the use of terms and specific searches by users are not as effective given the uncontrolled nature of the keyword approach.

A thesaurus should be used to provide a structured approach to retrieving information. This is reiterated in the draft guidelines for metadata published jointly by the National Library of Australia and State Library of Tasmania (2001) and states a strong preference be given to using a thesaurus to provide consistency in the use of terms and assist the user in focused searching.

Initiatives such as The Le@rning Federation have paved the way to develop a thesaurus (*ScOT*) that can be used in a variety of settings, such as for resource discovery on a school's Intranet page or within a state or territory department of education.

Scope of the Schools Online Thesaurus

The scope of *ScOT* is the P–12 educational level and will include terms relating to curriculum resources, educational administration, teaching methods as well as general subjects. *SCIS Subject Headings*, on which *ScOT* is based, is well placed to meet these needs. It is widely used in Australian school library catalogues, the subject content is comprehensive and relevant to the curriculum and the language of the headings is aimed at P–12 students.

To improve the effectiveness of *ScOT* in aiding resource discovery it is intended that the 'granularity' of many terms will be enhanced. For example, a user currently using *SCIS Subject Headings* can locate information on triangles, but a more granular or detailed heading will direct the user to search under different types of triangles, eg obtuse triangles. This granularity is important, particularly when used in SOCCI, as many of the objects described will be very fine in their detail or subject scope.

Structure of the Schools Online Thesaurus

Many traditional thesauri headings follow the post-coordinated approach whereby the heading represents a single concept or topic,

for example *Management*. Subject headings such as the *Library of Congress Subject Headings (LCSH)* and *SCIS Subject Headings* are primarily based on the pre-coordinated approach whereby more than one concept can be attributed to in a heading, for example *Railways – Models* or *Television and Children*. *ScOT*, like *SCIS Subject Headings*, will be comprised of both post-coordinated and pre-coordinated terms.

The relative merits, therefore, of pre-coordinated or post-coordinated terms in an online environment (eg recall and precision) and the ability of search engines to handle punctuation (eg hyphens) has been considered. SCIS commissioned an independent consultant to undertake research into the effectiveness of *SCIS Subject Headings* in the online thesaurus (Schauder, 2001). The final report included the recommendation that on balance the headings, regardless of structure, should effectively be able to be used as a resource discovery tool on the web.

However, there will still need to be revision of some headings in *ScOT* to make them more user friendly. For example, there is a considerable number of inverted headings, eg *Ability*, *Executive* or *Photography*, *Commercial* that should be changed to their natural language form. Thus *Photography*, *Commercial* becomes *Commercial photography*. This is recommended in the standards developed by the National Information Standards Organization (1994).

ScOT terms will have all the usual features associated with a thesauri including references to broader, narrower, related, non-preferred headings and scope and indexing notes.

Availability of the Schools Online Thesaurus

It is intended that *ScOT* will be available through the web. A feature of *ScOT* will be its interoperability that will enable systems from various departments and educational sectors to access and incorporate the same version of the thesauri without the need for changes.

A feature of the web access is that a user can search for specific terms by entering a phrase or keyword or browse through a list of terms and navigate up or down the hierarchical structure of the thesaurus. If a non-preferred



Internetting Corner

The following websites can be easily accessed on the Internet via the links found on Curriculum Corporation's Connections website for Issue 40 at <<http://www.curriculum.edu.au/scis/connect/connect.htm>>.

Addressing Bullying Behaviour

<<http://www.eduweb.vic.gov.au/bullying/index.htm>>

An initiative of Victoria's Department of Education, Employment and Training, this site provides extensive resources and links, and current best practice to address bullying in schools. The material is relevant for both primary and secondary schools.

SCIS 1024726

AskOxford.com Home Page

<<http://www.askoxford.com/>>

Students and teachers with language queries will find a wealth of searchable resources from Oxford University Press. Additional features include *Jargon Buster*, *Collective Terms*, *Word Games*, a selection of emoticons, links, *World English* and the option to email an expert.

SCIS 1065276

Australia Innovates

<http://www.phm.gov.au/australia_innovates/>

Sydney's Powerhouse Museum has gathered information and anecdotes on Australian innovations from the last century, along with links to current and emerging innovations. Suitable for students in years 4–12.

SCIS 1051567

Bright Sparcs Home Page

<<http://www.asap.unimelb.edu.au/bsparcs/bsparcshome.htm>>

Published by Melbourne University's Australian Science and Technology Heritage Centre this searchable database contains 3,000 entries of prominent people involved in the development of science, technology and medicine in Australia.

SCIS 990140

Dewey to the Rescue! A Multimedia Tour of the Dewey Decimal Classification

<<http://www.oclc.org/dewey/about/ddctour/index.htm>>

Suitable for reinforcing the main concepts of the Dewey Decimal Classification (DDC) to upper primary or lower secondary students, this animated overview also contains

additional Dewey links from the publishers of the DDC.

SCIS 1065167

First Fleet Online

<<http://cedir.uow.edu.au/programs/FirstFleet/>>

A resource for students, teachers and historians investigating The First Fleet. This website, from The University of Wollongong, contains a database of the convicts along with primary sources of information. The site also incorporates and promotes the use of research skills.

SCIS 1065170

Museum of Web Art

<<http://www.mowa.org/>>

An intriguing site dedicated to displaying excellence and innovation in the art, culture and technology of the World Wide Web. The layout and design of the site enhances the superb images that are displayed.

SCIS 1065195

NetAlert

<<http://www.netalert.net.au/>>

An initiative of the federal government, NetAlert aims to inform parents and students of safe and positive methods to utilise the Internet. Information on filters, dealing with junk emails and ways to protect privacy and identity are discussed.

SCIS 1026239

Our Bushtucker Website

<<http://openlearningcommunity.org/schools/larapinta/bushtucker/>>

Teachers undertaking a unit of work involving bush tucker should investigate this site which was researched and written by indigenous students in Years 5 and 6 at Larapinta Primary School in Alice Springs. The bush tucker (both plants and animals) specific to Central Australia is presented along with related information on the area's climate, geography and indigenous languages.

SCIS 1065177

Resources, Lesson Plans and Activities for Kindergartens

<<http://www.kn.pacbell.com/wired/fil/pages/listkindersu.html>>

A comprehensive array of links, themes, resources, listservs, and lesson plans developed specifically for Kindergarten teachers is housed on this Canadian site.

SCIS 1065328

Smith College Museum of Ancient Inventions: Home Page

<http://www.smith.edu/hsc/museum/ancient_inventions/home.htm>

The cultural and scientific significance of this collection of ancient inventions is examined on this website. The information presented is concise and complemented by clear images.

SCIS 1065315

Welcome to Sprocketworks

<<http://www.sprocketworks.com/>>

An innovative interactive site that uses animation to explore many facets of space, chemistry, US history, flight, ships and oceans. Downloading time for the animated sequences may prove frustrating for some students.

SCIS 1065334

Welcome to the Official Roald Dahl Web Site

<<http://www.roalddahl.com/index2.htm>>

Primary students will be engrossed by this vibrant and informative website. The site is easy to navigate for its intended audience and combines Quentin Blake's illustrations with text and audio prompts. Content includes: The Roald Dahl Foundation; puzzles; links; background material on Dahl, his books and associated movies; and hints for teachers using his books in the classroom.

SCIS 1045064

World Almanac for Kids

<<http://www.worldalmanacforkids.com/>>

A companion for the popular book, this site encourages students to browse through a variety of facts, games and quizzes on topics as diverse as Historical Birthdays, Inventions, American Presidents and Nations.

SCIS 1065346

Reviewed by Nigel Paull, South Grafton Primary School, <paull@turboweb.net.au>.

The Internet sites abstracted in Internetting Corner are often of a professional nature and should be initially viewed by teachers and Teacher Librarians to determine suitability for students. The links, content and address of sites may not be permanent.



Resources

Contracts for Independent Learning: Engaging Students in the Middle Years

A practical resource for teachers

Authors: Jeni Wilson and Lynda Cutting

Publisher: Curriculum Corporation, 2001

RRP: \$33.30

SCIS order no: 1024597

ISBN: 1 86366 708 3

This publication is based on Gardner's Multiple Intelligences, Bloom's Taxonomy and negotiation of learning topics and content. The first impression of this resource is that it is self-contained. It is a ready resource that aligns well with curriculum differentiation in catering for individual needs of students in the middle years. It draws on the notions of choice and negotiation in order to empower students with more ownership of their learning.

Teachers vary in their response to using the various state curriculum frameworks; some teach by them to the letter while others use them as intended, as frameworks within which creativity can flourish and student voice is enabled. This text promotes the possibility of the latter. Student engagement and connectedness to school in the middle years (5–9) largely hinges on the relevancy of the curriculum and the relationships developed in the classroom. Kiddey and Robson in their book *Make Their Heads Spin!* discuss 'minding connections' and 'making it sing' (p 23), which refers to the need for teachers to factor in individual learning styles, peers in the

classroom and ensuring that learning takes place through exciting and motivating processes and where learning is contextualised, relevant and challenging for the students.

The authors, Jeni Wilson and Lynda Cutting have provided possible ways to implement learning contracts: literature contracts, integrated units contracts and negotiated and individual contracts. They have also included generic activities within the levels of thinking and Multiple Intelligences depicted by Bloom and Gardner respectively.

The organisation of contract learning, as described in the text, allows for a range of configurations within the curriculum and various student groups. The built-in flexibility of this text tool makes it a favourable resource for teachers across the key learning areas of the middle years of schooling. The authors have proposed ideas, approaches and possible procedural steps to guide teachers while concurrently factoring in variations.

Although not aligned with state curriculum frameworks, teachers would be able to easily link the contract content with learning outcomes for upper primary and lower secondary. The systematic and predictable format of the contracts allow for easy scanning and interpretation of the activities. The organisation of the activities under the headings of 'finding out (knowledge and comprehension)', 'sorting out (analysing and application)' and 'speaking out (synthesising

and evaluating)' provides a structure within which teachers can develop their own contracts with and for the students.

Assessment of such open-ended approaches to student learning necessarily requires a range of assessment tools. In line with the empowering nature of contracts, it follows that assessment of the learning from the contract also be empowering for the students. The authors have provided assessment possibilities such as Multiple Intelligences checklists, rubrics and self-assessments, which encourage student reflection on their progress, and the process and final contract products.

This text is a practical resource for teachers in the upper primary and lower secondary classes who want to draw in students, to engage them in their own learning and to promote learning through a constructivist model of learning. Teachers who want to encourage student voice and choice within a community of inquiry and where autonomy and self-responsibility are collective goals will appreciate the depth of this resource.

Reviewed by Kerry Robertson, BTch, GradDip (Lang & Lit), MEd (Lang & Lit)

SCISWeb Testimonial

Sue Taylor and Kelly Swift, library staff from Dalby Christian School, New Zealand, have the following to say about the use of SCIS in their school:

Since subscribing to *SCISWeb* earlier this year, we have not in the least taken for granted what an incredible help it has been. When we first created an order in trepidation, we wondered what would happen! Would it really work as well as we thought? Would it save us hours and hours of cataloguing? Would we be able to operate the system not even really knowing how to use the Internet? Well the answer to all of these questions is – YES.

SCISWeb has been very easy to operate, saving us hours and hours of cataloguing and mental anguish! We have even gained confidence in using the Internet. Now we are able to add great numbers of items to our collection within minutes. This would normally take us days of searching Dewey numbers and subject headings. We still have to catalogue a few things by ourselves, which is a good time to reflect on when we had to do all of the cataloguing without the help of SCIS. Using SCIS has refined our ways and also we are being more methodical in the processing of items. We would recommend *SCISWeb* to anyone who is even remotely thinking about whether it would be an asset to their library.

SCIS: Curriculum-Related Electronic Resources in Schools Survey 2001 (cont.)

being given. While most Teacher Librarians realised the importance of good communication between the Information Technology staff and themselves, this was rarely the case. Liaison was very easy for Teacher Librarians who were also the Information Technology Coordinators and/or members of the Information Technology Committee.

School and school library websites

Although 72 per cent of schools had a website, only 29 per cent of school libraries had their own library home page. Of the 29 per cent of libraries that had a website, only 50 per cent were linked to the school's website.

Intranet

The majority of respondents stated that the Information Technology Coordinator had overall responsibility for the school Intranet. Almost 50 per cent of library staff were involved in managing content on the school Intranet. This included Intranet creation and coordination, management of library pages and supplying websites. The major ongoing issue for library staff was the time and effort associated with the routine maintenance of the pages.

The question relating to the school or school library philosophy re access to electronic and physical resources showed that 72 per cent of Teacher Librarians treat these resources the same way. However, 20 per cent saw electronic and physical resources as fundamentally different in nature. In many cases the library system did not provide facilities for interfiling.

While most Teacher Librarians would like to see electronic and physical resources treated equally, many schools are just starting to make the necessary changes to do this. Overall, Teacher Librarians seem very enthusiastic about being able to provide access to catalogued websites via their school library system. Very few respondents were unable to see the value of this facility.

Teacher Librarians were asked to provide information about how they managed information relating to 'discovered' electronic resources otherwise known as websites or URLs. Of the 50 per cent of respondents who stated that they would like to manage their URLs differently, most stated that they wanted their websites catalogued and integrated within the library system and available on the Intranet. Very few respondents (10 per cent) use URL-checking software. The remaining 90 per cent of respondents either did nothing or just deleted dead links on an ad hoc basis.

The primary sources used to 'discover' and access curriculum electronic resources were: teachers within the school, professional literature, listservs, search engines and education-related portal sites. Most library staff used a search engine to find URLs. Favourite sources for finding websites included OZTL_NET, Scan, Google, EdNA and SCIS.

Future plans for curriculum-related electronic resources within the school

This section sought to elicit the school's vision for developing, organising and managing their

curriculum-related electronic resources. In order of preference, respondents would like to have:

- access to library *OPAC* in all classrooms throughout school
- one computer or laptop per student
- all resources to be treated equally being catalogued and accessed on the one database
- direct link to websites from library *OPAC*, ie purchase library system that interfaces with the Internet
- new library system (please!)
- quicker and more reliable Internet access
- more support from Information Technology staff
- more professional development
- better communication between staff in general
- more time
- more qualified Teacher Librarians
- access to *OPAC* from outside school (remote access to school community)
- cabling in classrooms and not just computer lab, ie completely network the school
- upgraded equipment and software
- more money
- all school resources managed on school Intranet.

SCIS is pleased to note that 82 per cent of the respondents were aware that the SCIS database contains quality catalogue records of websites.

Natasha Kuyken and Ester Csaky
SCIS Customer Support Staff

An Online Thesaurus for Australian Schools (cont.)

term is entered, *ScOT* will respond with the correct heading(s).

The most obvious advantage of *ScOT* being available on the web is that a 'real time' version can be made available to the user, thereby allowing access to the most recent or up-to-date release of the thesaurus.

Management of the Schools Online Thesaurus

In June 2001, the inaugural meeting of the Schools Online Thesaurus Consultative Group (ScOTCG) was convened in Melbourne. ScOTCG consists of representatives from state, territory and non-government school sectors as well as organisations such as Curriculum Corporation. ScOTCG's brief is to manage the

ongoing development of *ScOT*, such as incorporating new terms.

Preliminary work undertaken by the SCIS unit at Curriculum Corporation on recommendations for overarching principles and policies, interoperability standards, structure and content, and ongoing workflows has commenced. Reports received on technical standards and thesauri indicate that both text and GEM RDF formats for maximum interoperability should be explored further. The joint partner with Curriculum Corporation involved in The Le@rning Federation, education.au limited is looking at some technical aspects of the *Schools Online Thesaurus*.

Conclusion

The development of *ScOT* represents a major step forward in the development of online educational resources in Australia and it recognises the importance of a robust controlled vocabulary that can effectively navigate through today's online environment.

Steven Haby
Manager, Metadata Initiatives
SCIS Unit, Curriculum Corporation

The article with notes and bibliography appears in the online version of *Connections 40* at <<http://www.curriculum.edu.au/scis/connect/cnetw01/cnet40in.htm>>.

The School Intranet: Making Schools Even More Resourceful

Most Australian schools currently employ the Internet in some capacity in their teaching-related tasks and in administration. The Internet is a term with which we are all familiar and our understanding of its potential continues to develop. However, despite our increased awareness of the web and its associated technologies, our comprehension of an Intranet, another hybrid term in the world of Internet technologies, is still very limited.

What is an Intranet?

Although the term may be quite familiar, most people still do not completely understand the difference between an Intranet and the wider world of the Internet. It may help to understand that a significant similarity between the two mediums is that they use the same technologies.

An Intranet may be described as a more controlled type of Internet environment, whereby access to information stored on an Intranet is available only to a restricted community, such as a school. An Intranet offers all the benefits of the Internet but has the advantage of controlling the quantity and quality of content available to community members.

Why use an Intranet?

We have probably all experienced the frustration of seeking information on the web, the sheer content of information available and the general poor performance of search engines attempting to organise that information. However, we appreciate the enormous potential of an Internet as a forum

for communication and information transfer which can be accessed from almost any connected terminal in the world.

The same principles of the Internet can apply for a school Intranet. Members of the school community may access information on an Intranet from workstations within the school or from home. The content of an Intranet, however, will be much more refined than the unregulated material available on the Internet. The kinds of information available on an Intranet are determined by the school but may include:

- email for all school members
- online access to electronic resources such as CD-ROMs
- class material electronically published by teachers
- online access to the school library catalogue
- bulletins and newsletters
- class discussion groups.

An Intranet may also serve as an archive for teaching materials and lessons that are most often lost when a teacher leaves a school or cannot locate last year's work. Duplication of effort is minimised when the information is organised and stored on an Intranet.

Encouraging involvement in the school community

Parents may feel more involved in the school community through the use of the school Intranet. Access from home means that parents may be able to view newsletters, bulletins, reports and their student's homework or lessons online.

Student safety

An Intranet provides a safe learning environment for students. The information made available on an Intranet is regulated by the school, thus the potential for students to access inappropriate online content is reduced.

Up-to-date information

Any updates or corrections to material posted on an Intranet may be made to one copy on the server; the updated version will automatically become available to all Intranet users. This will ensure that material on your Intranet is always current.

A flexible learning environment

The school Intranet makes the learning environment much more flexible for the school community. Parents may participate in their child's learning at more convenient hours and may communicate with school staff via email. Students will enjoy the diverse media of electronic resources while they obtain valuable computing skills. The school Intranet will enhance learning and communication for a school community.

Organising an Intranet

Your Intranet will be more effective if it is organised well. Schools may find that the information management skills of the Teacher Librarian are best employed for this task. Schools may also like to investigate some of the Intranet content management systems now available.

Bridie Mackay, SCIS Project Officer

SCISWeb Testimonial

Winis McColl, Librarian at Macleans College, New Zealand, has the following to say about the use of SCIS in her school:

Macleans College, New Zealand, is an urban secondary school with a roll of just over 1800 students. The library is staffed by:

- teacher with library responsibility (4 hours)
- librarian (40 hours)
- two library assistants (31 hours in total).

I have been using *SCISWeb* for about a year now. Once the scanner is correctly configured, it only takes a few minutes to scan the barcodes of

20 to 30 books. Downloading directly onto my floppy disk and then loading onto my library system is very straightforward and takes only another few minutes. It is then a matter of finding a suitable time to do a backup on my library system before these records can be checked and amended as necessary. We have anywhere from 300 to 800 students coming through our library doors each day, so prior to using *SCISWeb* our 'new books awaiting cataloguing' never seemed to diminish. *SCISWeb* has been a real time and effort saver. I can strongly recommend schools trial this for themselves.

Making Connections: The Role of the Teacher Librarian in the Information Age

In the following article, John Roulston explores some interesting possibilities for Australian school libraries in the 'information age' and in doing so raises many issues that all Teacher Librarians and school communities will need to address.

A diversity of new and complex scientific and technological ideas are accelerating the pace of technological change in our world and affecting the way we view education. Whether we like it or not we are all along for a ride which shows no sign of slowing down.

It is difficult to predict the impact of phenomena such as the 'knowledge economy' convergence, or the penetration of multi-capable information technology systems on schools, homes and workplaces. As digital technologies evolve and are adapted to different uses, information technology will increasingly permeate work and life, from public administration and finance, to all sectors of industry, media and communications and leisure.

Students now in Australian schools can expect to work and live in environments requiring competence in computer use and in convergent digital technology. More than this, they will be required to adapt their skills and understanding to change. The implication is that information technology skills need to be conceptualised broadly and emphasise learning how to learn, rather than the acquisition of specific technical skills that will need to be frequently unlearned. Student skills in using information technology will be inseparable from their analytical skills and their capacity for creativity, teamwork, problem-solving and communication skills.

Recent research suggests that students now entering further education and training have a limited sense of the skills they will need to adapt to changing work and study environments. Redressing this will require building stronger connections between learning experiences in schools and the rapidly changing post school environment which students will enter.

In recent decades, curriculum development in Australian schools has been characterised by increased recognition of convergence between

The role of the Teacher Librarian is also addressed by the Australian School Library Association (ASLA) and the Australian Library and Information Association (ALIA) in the latest edition of ***Learning for the Future: Developing information services in schools (Second Edition)***, published by Curriculum Corporation, 2001.

and across discipline areas, in areas such as content, skills and development of assessment practices. This flexibility has been informed by notions of the competencies that all students should acquire through horizontally and vertically integrated approaches to curriculum planning. The national development of eight key learning areas has been a major agent in changing perceptions of curriculum, recognising 'cross curricular areas' such as information technology, environmental studies, personal and interpersonal skills, career and work education, literacy and numeracy.

There are possibilities for radical change and gradual change inherent in the current curriculum map. How teachers and Teacher Librarians cope with this change will determine how well we achieve a responsive curriculum model for an information technology environment.

In this landscape of change, convergence, information overload and technology those people who are best able to manage information so that it remains accessible and useable are critical to the success of twenty-first century education. The Teacher Librarian is perfectly placed to be central to this success.

Educators, including Teacher Librarians, are split over the impact that technology may have on schools of the future. Educational consultant Russell Boyle, for example, envisages schools with teachers online at all times, located in different countries but teaching a common curriculum, and ready to give students from all parts of the world the real-time assistance and feedback that is

necessary to optimise their learning. He expects teachers to do little face-to-face teaching, working mostly from home and interacting with students and colleagues online. On the other hand, many other educators argue that computers and information technology have not led, and indeed should not lead, to any profound changes in schools and schooling.

It would, however, be a brave person indeed who suggested that the future of our schools and our information providers would not be linked with technology. How then will this dependence on information technology affect the life and work of the Teacher Librarian of the twenty-first century? And how will the Teacher Librarian manage the role of professional support person to the teacher in the classroom – or virtual classroom?

Five major challenges

According to the research literature the Teacher Librarian is facing at least five major challenges for the future.

1. The role change from warehousing to consulting

As schools change from passive learning environments into active ones, the role of the Teacher Librarian has to adjust as well. School restructuring requires that the Teacher Librarian ventures from the library to collaborate and connect with teachers and administrators. The addition of technology into the learning environment enhances information retrieval and offers the Teacher Librarian a new entrée into the classroom curriculum. New, more student-centred teaching methods demand the support of information resources and training in their use. With networks linking all areas of the modern school, the best place to access

Editor's note: The author's views do not necessarily reflect other education department policies. Teacher Librarians with any questions about school library policy issues should contact the relevant support group in their education department.

continued on page 14

Making Connections: The Role of the Teacher Librarian in the Information Age (cont.)

information may no longer be within the walls of the traditional library.

Teacher Librarians will have to move beyond the 'warehouse concept' of traditional libraries to consult and connect with classroom teachers. Suggesting resources, locating and acquiring needed materials, recommending strategies, facilitating use of technologies, and instructing students and teachers in optimal information-seeking methods replace the traditional Teacher Librarian tasks of material circulation. Many traditional tasks may have to be left to aides leaving the professional free to work directly with students and teachers.

Teacher Librarians will have to connect with the new technologies. They will have to promote them and instruct students and teachers in their use. As students become more self-directed learners the Teacher Librarian becomes a consultant in the student's quest for supporting information and the development of appropriate presentation strategies.

An area of major consultation between teachers and Teacher Librarians will develop as technology becomes more and more integrated into the curriculum. Library media specialists know that moving from isolated skills instruction to an integrated approach is an important step that takes a great deal of planning and effort. Over the past 20 years library professionals have worked hard to move from teaching isolated 'library skills' to teaching integrated information skills.

Schools seeking to move from isolated computer skills instruction will also need to focus on integration. Successful integrated information skills programs will need to be designed around collaborative projects jointly planned and taught by teachers and library professionals. Teacher Librarians, computer experts and teachers will have to connect to develop units and lessons that will include computer skills, general information skills and content-area curriculum outcomes.

2. *The change from developing collections to accessing information*

As more and more teaching material is made available in electronic formats, school libraries

find themselves lagging behind in print acquisitions. Teacher Librarians look more to online and other electronic sources to meet the information needs of students and teachers. Access to information, whether by CD-ROM, Internet, online database, video, fax, microfiche or traditional print is overtaking ownership of information as an evaluation benchmark. Acquisitions and selection criteria take on an entirely new meaning when considering access to online services.

The challenge for the Teacher Librarian is in finding the time to seek out and evaluate appropriate information resources online as well as identify and select good age-appropriate and curriculum-specific literature. Despite the value of the Internet, it has, without doubt, increased the Teacher Librarian's workload. The danger is that getting connected with technology might reduce the time for getting connected with students and teachers.

3. *Extending of role to that of information centre manager*

The information explosion has created far more information than one school library could possibly contain. The Teacher Librarian is responsible for locating, acquiring, disseminating and tracking information resources of many types. The Teacher Librarian also manages the budget and evaluates and selects new materials for purchase. In teaching students and teachers to be discriminating users of information the Teacher Librarian must also teach ethical use of the materials retrieved. Copyright and plagiarism become significant issues when digital copies may be seamlessly integrated into student work. The Teacher Librarians are often the only people in a school with any training in these legal issues. This means they play an important role in the development of access policies and acceptable use agreements. All of these tasks require managerial expertise equivalent to that required of corporate information centre managers.

4. *Not losing sight of the fact that Teacher Librarian is always a teacher*

The Teacher Librarian as teacher is the chief provider of information resources in schools,

the person to whom teachers and students will turn for suggestions, advice and guidance in accessing the information they need.

Finding the time to fit this most vital of roles into the increasing administrative demands is perhaps the greatest challenge for the Teacher Librarian.

5. *Where will I find the money?*

As tasks grow in libraries the need for support staff increases. Some of the traditional tasks, such as database searching and catalogue maintenance which was once the duty of the professional, will now have to be handed to the paraprofessional under the supervision of the Teacher Librarian. The increase in staff as well as the increased supervision will add to already stretched library budgets.

Anyone connected with technology knows that both hardware and software is often obsolete almost before it is installed. The cost of ever-increasing technology needs versus the cost of print materials is a real dilemma for the Teacher Librarian.

In order to manage all of their varied roles Teacher Librarians will have to connect more than ever before. As some people have put it – they will have to go from 'bricks to clicks', or 'from books to bytes'. And this does not just mean the clicking of the mouse but also the 'clicking' or 'clique-ing' with others. They will have to look at ways to share costs, resources, facilities and information creatively. And in some ways the electronic future that seems to destroy the traditional library may be its saviour.

Dr John Roulston is Executive Director of the Association of Independent Schools of Queensland. This article is an edited version of his Keynote Address delivered at the School Library Association of Queensland Biennial Conference.



Cataloguing and Database News

New and changed subject headings and references

In every issue of *Connections* SCIS publishes a list of those subject headings and references that have been added or changed since the last ISSC Teleconference. In addition to individual lists SCIS also publishes a cumulative list of headings.

SCIS Subject Headings Fourth Edition is now out of print and unavailable for purchase. Customers are encouraged to print off the cumulative list for insertion as an Addendum at the back of the *SCIS Subject Headings Fourth Edition*. This ensures customers are able to keep the Fourth Edition as up-to-date as possible prior to publication of the next edition.

These lists of headings can be located on the SCIS website at <http://www.curriculum.edu.au/scis/database/changes.htm>.

New, amended and replaced subject headings from the SCIS Information Services Standards Committee (October and December 2001)

Aficionados
USE Fans (Persons)

Alternative medicine

Add NT Aromatherapy

Aromatherapy

BT Alternative medicine
Therapeutics
RT Botany, Medical
Essential oils
Massage

Botany

Add NT Botany, Medical

Botany, Medical

Add BT Botany
Add RT Aromatherapy

Business – Data processing

Delete UF On-line data processing
UF On-line processing
Add UF Online data processing
UF Online processing

Cataloguing

Add RT Metadata

Computers in education

Add NT ELearning

Crime stories

Add SN Use for works of fiction about crime and solving crimes.

Delete UF Detective stories
Add RT Detectives – Fiction

Dance music

Delete NT Music, Popular

Data about data

USE Metadata

Data transmission systems

Delete UF On-line access
Add UF Online access

Databases

Delete UF On-line databases
Add UF Online databases

Detective stories

Delete USE Crime stories
Add USE Detectives – Fiction

Detectives – Fiction

UF Detective stories
RT Crime stories
Mystery and suspense stories

Devotees

USE Fans (Persons)

Educational technology

Add RT ELearning

ELearning

UF E-learning
ELearning – Study and teaching
Electronic learning
Internet in education
Internet in the curriculum
Online curriculum
Online learning
Online teaching
Web-based learning
Web-supported learning
BT Computers in education
RT Educational technology
Flexible delivery of education
Flexible learning
Internet (Computer network)

E-commerce

Delete **E-commerce** and replace with

Ecommerce

Add UF E-commerce

E-commerce

USE Ecommerce

E-learning

USE ELearning

E-mail

Delete **E-mail** and replace with **Email**

Delete UF Email

Add UF E-mail

Elearning – Study and teaching

USE Elearning

Electronic learning

USE ELearning

Electronic publishing

Delete UF On-line publishing

Add UF Online publishing

Email

Delete Email and replace with E-mail

Delete USE E-mail

Add USE Email

Enthusiasts

USE Fans (Persons)

Essences

USE Essential oils

Flavouring essences

Essential oils

UF Aromatic plant products

Essences

BT Oils and fats

Plants

RT Aromatherapy

Massage

Fanaticism

Add RT Religious fundamentalism

Fans (Persons)

Use for works about enthusiasts or devotees, for example supporters of sports, followers of film stars or celebrities.

UF Aficionados

Devotees

Enthusiasts

Supporters

RT Hobbies

Flavouring essences

Add UF Essences

Flexible delivery of education

Add RT ELearning

Cataloguing and Database News (cont.)

Flexible learning

Add RT ELearning

Fundamentalism

USE Religious fundamentalism

Fundamentalist churches

USE Religious fundamentalism

Herbs

Add BT Plants

Hobbies

Add RT Fans (Persons)

Indexing

Add RT Metadata

Information services

Delete UF On-line access

Add UF Online access

Internet (Computer network)

Add RT ELearning

Internet in education

USE ELearning

Internet in the curriculum

USE ELearning

Machine-readable data

Add NT Metadata

Massage

Add RT Aromatherapy

RT Essential oils

Metadata

Use for works on metadata elements and the processes of applying metadata.

UF Data about data

BT Machine-readable data

RT Cataloguing

Indexing

Modems

Delete UF On-line access

Add UF Online access

Novels in verse

USE Verse novels

Oils and fats

Add NT Essential oils

On-line

For terms beginning with On-line see Online.

On-line access

Delete On-line in the heading and replace with

Online

On-line data processing

Delete On-line in the heading and replace with

Online

On-line databases

Delete On-line in the heading and replace with

Online

On-line processing

Delete On-line in the heading and replace with

Online

On-line publishing

Delete On-line in the heading and replace with

Online

Online curriculum

USE ELearning

Online learning

USE ELearning

Online teaching

USE ELearning

Plants

Add NT Essential oils

NT Herbs

Poetry

Add NT Verse novels

Popular music

Delete scope note 'May be further subdivided by decade, eg Popular music – 1951–1960'.

Reading materials

Add UF Reading materials – Problems, exercises, etc

Reading materials – Problems, exercises, etc

USE Reading materials

Realism

Add NT Reality television

Realism in motion pictures

Add RT Realism in motion pictures

Reality-based television

USE Reality television

Reality shows

USE Reality shows

Reality television

UF Reality-based television

Reality shows

Reality TV

BT Realism

Television

RT Realism in motion pictures

Television documentaries

Reality TV

USE Reality television

Religion

Add NT Religious fundamentalism

Religious fundamentalism

Use for works on religious groups which believe in strict maintenance of traditional orthodox beliefs or doctrines, and which may be militant in espousing these beliefs.

UF Fundamentalism

Fundamentalist churches

BT Religion

RT Fanaticism

Stories in rhyme

Add RT Verse novels

Supernatural

Add RT Unexplained phenomena

Supporters

USE Fans (Persons)

Television documentaries

Add RT Reality television

Television

Add NT Reality television

Therapeutics

Add SN Use for works about the treatment of diseases.

Add NT Therapeutics

Unexplained phenomena

Add RT Supernatural

Verse novels

Use for novels written in verse, whether rhyming or not.

UF Novels in verse

BT Poetry

RT Stories in rhyme

Web-based learning

USE ELearning

Web supported learning

USE ELearning