connections

In this issue…

Metadata (part 3)

During 1999 Connections *published several articles explaining metadata, its relevance to school libraries, and the need to deal with both physical and digital resources. Heather Watson pursues that theme in this issue with an article describing national processes to manage and further develop Australian metadata standards consistent with international developments. This work will have, in the long term, as much relevance for Australian schools and Teacher Librarians as existing cataloguing standards such as USMARC.*

Metadata and resource location

Increasing use of the Internet in education has heightened awareness of the need for user-friendly searching and navigation tools to locate information for users. However, the Internet has not developed with school users in mind and to select and manage access to the vast number of resources on the Internet presents a significant challenge. In addition, there are an increasing number of digital resources relevant to the schools sector including multimedia data, learning outcomes frameworks, resources for pedagogy and communication including resource persons, organisations, and curriculum content with schools applicability.

Consistent use of metadata provides a solution and has the potential to save users time in discovering resources and to significantly reduce network overload.

Currently, several established metadata formats exist internationally which all support such resource discovery. Each of these has its own strengths and limitations from a schools perspective.

Revising EdNA Metadata Standard Version 1.0

Australian education in all sectors has an agreed commitment to the EdNA Metadata Standard Version 1.0, based on the Dublin Core standard. The existing EdNA Metadata Standard takes a minimalist approach and a revision process is currently underway. Education.Au Limited is managing consultation and developments arising from the need to refine and extend Version 1, managers of the EdNA Online service.

Process of committees and consultation

An EdNA Metadata Standards Working Group was formed to take forward the process of revising the existing standard. This committee consists of representatives from each of the EdNA sectoral groups (Schools, Vocational Education and Training and Higher Education) with the Department of Education, Training and Youth Affairs (DETYA). Schools sector specific recommendations forwarded to this committee were developed by the Schools Metadata Consultative Group, formed with the assistance of Commonwealth funding to define school sector requirements.

Metadata (part 3) (cont.)

State and Territory representatives were nominated to develop this work with a specialist consultant developing documentation. A process including a workshop, and several telephone and electronic consultations defined schools sector recommendations and identified further enhancements to consider for subsequent metadata revisions. The enhancements were scoped and prioritised to support development. The papers were presented to the EdNA Schools Advisory Group meeting in early March and will then be publicly available on EdNA Online.

Why the standard needs revision
In the past year changes have occurred in the schools sector, in the development of Australian standards for all Government metadata, and in the development of metadata internationally. All of these factors have impact on current revision activity that aims to accommodate local values and allow for changes as required, but within an agreed framework of interoperability. It is recognised that the EdNA Metadata Standard will always be under review and development. Not only do the needs of stakeholders change in relation to metadata, but also as EdNA metadata conforms to Dublin Core agreements and is influenced by other international and local metadata trends, adjustments will always be required. This process of revision must be consistently managed to maintain interoperability.

Metadata revision activities have continued whilst many relaxed over the holidays, or pyrotechnically celebrated the end of 1999. The proposals submitted ensure EdNA Metadata Standard Version 2 is effective for school users. It is intended that the process of revision be undertaken by all sectors and completed by the middle of 2000.

Issues in revising the EdNA Metadata Standard: a schools sector perspective
The issues outlined have arisen from analysis and discussion of the differences between State and Territory metadata standards, the current EdNA Metadata Standard and international standards, which are also currently changing. The workshop of State and Territory representatives raised additional issues and identified recommendations for change to meet the specific needs of the schools sector.

A range of schemas and vocabularies
Metadata is being developed simultaneously within State and Territory requirements such as state-specific learning outcomes information, in parallel with defined national standards such as Australian Government Locator Service (AGLS) and with participation in international activities such as Dublin Core Metadata Initiative (DCMI). Elements are defined in response to a range of needs, and tools developed to assist users must facilitate seamless movement between schemas and accommodate local and regional vocabularies and priorities.

This mix of influences creates the potential for confusion, but States and Territories are conforming to the agreed Dublin Core and EdNA Metadata Standards, and are also able to include their own local descriptive elements to support specific priorities. The Tasmanian *Discover* website, the Victorian *Education Channel* and the Education Queensland metadata development work, all illustrate the capacity for local and interoperable standards to be effectively combined.

Effective support for resource discovery and metadata application
There is a general awareness of the need to maintain a balance between the easy application of metadata and effective searching outcomes for a user. To support user discovery of resources, terminology adopted could be derived from international systems, nationally agreed standards and protocols or from defined local vocabularies. This varied range of sources is particularly evident in relation to schools curriculum. Benefits of value-adding to make resource discovery easier for users, is challenged by the need for a minimalist approach to metadata application so that the task of applying metadata remains cost effective for developers, resource administrators and content managers.

Supporting easy resource discovery by users is the intention, but this must be balanced against issues such as the range of abilities of people applying metadata, the financial and resourcing issues required for metadata application and the extent of value-adding for local applicability.

Defining some fields as mandated and leaving others as optional is one approach used to balance these issues. Endorsing and sharing metadata application tools has potential to resolve some challenges in this area.

Formal classification systems/thesauruses
A managed approach in this area within the EdNA Metadata Standard revision would support a range of vocabularies/systems to include international, national, learning area specific and local types. Their use would not be mandatory, but a managed register of controlled vocabularies and classifications could support resource discovery within the wide range of learning contexts.

Natural language keywords are valued in describing the topic of content in a resource. For future iterations of the EdNA Metadata Standard it is intended to investigate mechanisms to allow natural language searches across a number of databases or formal classification systems to support a range of users. Revisions of the EdNA Metadata Standard could include support for the use of natural language keywords.

Implementing the EdNA Metadata Standard
While it is not yet possible to fully automate metadata application, the development of application tools would enhance consistency and accuracy within defined approaches. Currently several metadata tools are being developed for whole-of-government publishing. It is likely these or modified versions will influence and improve processes for the schools sector. The EdNA community in collaboratively defining those most appropriate for schools sector needs could disseminate investigation and evaluation of these tools across states to strengthen participation.

A 'translation' tool could be provided centrally to facilitate mapping between state specific schema within the EdNA Metadata Standard. This would accommodate searches for appropriate resources across a wider range of material and enable resource discovery when state preferred terms are not known to external users.

✔ Handy Hints

Frequently Asked Questions (FAQs)
We encourage customers to print up SCIS OPAC FAQs located at <http://www.curriculum.edu.au/scis/manuals/faq.htm >. These FAQs contain valuable information to enhance your search strategies when searching in SCIS OPAC. For example, if you have set Limits in SCIS OPAC to refine your search, it is important to know that these limits apply in all search types except Heading. If you require further assistance with searching in SCIS OPAC please contact SCIS Customer Support staff who will assist you.

Checking call numbers of downloaded records
Sometimes SCIS customer support staff receive calls from customers requiring explanations for the assigning of Dewey Decimal Classification numbers to particular resources by the SCIS cataloguers.

Resources about fairy tales are deemed to belong in the non-fiction area of the library and are assigned a Dewey number. Biographies is another resource area that is often queried. SCIS cataloguers correctly assign call numbers to resources related to the subject of the person's area of expertise or importance. Teacher Librarians who prefer to keep all biographies at the same Dewey number would need to change the call number for these resources.

CC News

1. Cataloguing of websites
Bev Blackwell is Cataloguing Coordinator of Curriculum Materials Information Services at the Education Department of Western Australia. Bev has been responsible for managing the trial of cataloguing websites onto the SCIS database and has recently written a report which will appear in Cataloguing/Database News at <http://www.curriculum.edu.au/scis/database.htm>.

Schools are now able to download catalogue records of websites from the SCIS database after locating the SCIS numbers in SCIS OPAC. Websites can be located by entering 'website' in a keyword search in SCIS OPAC. The SCIS numbers for the sites required for your school can be recorded then entered into SCISWeb. This will enable you to download the catalogue record to import into your library software system. We have received positive feedback from Teacher Librarians who have trialled this. We advise customers to consult user groups or library software system support if they have any queries about importing catalogue records of websites.

2. SCIS Authority Files subscription 2000
Curriculum Corporation will release a new version of the previous product *SCIS Subject Headings disk*. Please note that this product has been renamed and will be now known as the *SCIS Authority Files*. We plan to include other authority files at a later stage. This product contains the entire contents of the SCIS database subject authority file and complements the SCIS subject headings. Used within the school's library system the product can quickly enhance subject access to the school's resources by creating references.

The product will be available mid-2000 with order forms to be dispatched to all schools by June. Check our website at <http://www.curriculum.edu.au/scis/catalog/webupdat.htm> for full product details, functional description and order forms. We advise customers to check compatibility with their library software supplier before ordering the product.

3. Curriculum Corporation primary and secondary catalogues online
Information about products available for purchase from Curriculum Corporation can be found at <http://www.curriculum.edu.au/catalog/catalog.htm>. When viewing this website you will notice that we have added the SCIS number to each of these resources. A number of the resources have been reviewed by an independent person, for example, *Indonesia Kaleidoscope* at <http://www.curriculum.edu.au/cgibin/CC_catsearch.cgi?cmd=full&cat_id=436&slevel=PRI >. These reviews have been added to the USMARC tag 856 subfield u in the catalogue record on the SCIS database. This will be useful when using SCIS OPAC as a selection tool for resource acquisition.

4. Tutorial on using the Internet
On the Access Asia page of the Curriculum Corporation website at <http://www.curriculum.edu.au/accessasia/network/tutorial/tutorial/module1/index.htm> there is a tutorial on how to use the Internet. This tutorial would be suitable for use by students and staff.

5. SCIS: assisting schools to manage knowledge
In January 1999, Keith Gove, Manager of Information Services at Curriculum Corporation, delivered a paper at the ASLA Conference in Geelong. The paper, titled *SCIS: assisting schools to manage knowledge,* has been placed on our website at <http://www.curriculum.edu.au/scis/whatis.htm>.

The paper argues that the role of Teacher Librarian is changing. Like all managers, Teacher Librarians should delegate as much as possible, outsource what is not 'core business', and free themselves to undertake crucial tasks such as teaching and learning. Resource selection is a relevant task, but the cataloguing of those resources is not; it can be largely outsourced. Time spent on this technical activity is time not spent on curriculum, information literacy or other teaching and learning activities.

Television Broadcasts

Many schools are taking advantage of the *Screenrights Agreement** to tape television programs off-air. After making the effort to record these programs for educational use, it is worth considering cataloguing those programs that the school decides to keep.

Cataloguing television broadcasts has a number of advantages:

- Catalogue records enable specific subject access to individual programs, so you don't have to skim the titles, hoping they accurately reflect the content, check notes made on the containers, or rely on the sometimes vague memories of teachers wanting a particular program.
- Having a catalogue record of taped-off-air programs also helps with the practical 'housekeeping'. It is an easy way of keeping track of the location of programs within the school. Many programs are regularly re-broadcast (especially the ABC education TV programs). If you already have a copy you don't need to waste time making another recording. Since programs are only to be recorded 'for educational use', cataloguing them makes this educational use clear.
- If all taped broadcasts are coordinated by the library, you can ensure that all copies held in your school are correctly marked, to meet the school's legal requirement under the conditions of the Screenrights Agreement:
  - Reference to the Copyright Act Part VA
  - The name of your school
  - The day on which the broadcast was taped
  - For additional copies, the day on which the copy was made.
- In addition, if your school is selected as a sample school for checking usage under the Screenrights Agreement, you will need to keep records of all programs taped by your school. Having a centralised system already in place makes this task easier.

SCISWeb and television programs

Now for the good news. It is worth checking SCISWeb to see whether the program has been catalogued. Some SCIS cataloguing agencies, including the Education Department of Western Australia, catalogue taped-off-air programs. For example, a large percentage of the titles listed in the ABC's *Education TV program guide* are available on SCISWeb.

Many broadcast programs also become available commercially. The record for the taped-off-air program will be updated with any additional information on the commercial copy when possible, or you can easily amend the record to reflect your copy. You should note that it is illegal to copy a commercially produced video, even if your school has bought it. However, a television broadcast may be taped and copied even if the program is also available commercially.

Hints for searching SCISWeb OPAC

Unfortunately, since television programs don't have ISBNs you must find them on the SCIS OPAC before you can order the record. It can be quite difficult to find them, especially when the title in your local TV guide is different from that shown on the screen. As for all videorecordings, cataloguing information is taken from the screen. Additional entries are made for other titles such as on the accompanying packages or notes if the cataloguer has access to them.

If the title is distinctive, a simple Title search will find the record on SCISWeb. However, titles of educational television programs are often short and general.
For example, the program *Signs* in the *Made by design* series (latest ABC broadcast, 8 Nov, 1999) is on SCISWeb. A Title search on *Signs* gives over 120 hits.

The solution? Use a Builder Search, by clicking on the Builder button.

Builder Search

A Builder Search enables you to search under more than one word or phrase anywhere in the record. Up to three different search terms can be combined to give a very specific search. You can specify the part of the record to be searched (eg. Title, Series, Author Name) or search for a term anywhere in the record (Keyword Anywhere).

Search under the title *Signs* AND the series *Made by design*. The correct record appears. In detail:
Search for: signs
Search in: Title (TKEY) AND
Search for: made by design as a phrase
Search in: Series (SER)

Searching tips

- When searching under more than one word, remember to change the default from 'any of these' to 'as a phrase'.
- If there is no series, or the series is non-distinctive, try adding videorecording as a Keyword Anywhere.
- If you are searching for a number of titles in a series, try a Builder Search under the series. All the titles catalogued should appear in alphabetical order, making your choice easy. This technique also helps identify programs with titles differing slightly from the title given in your local TV guide.
- A Builder Search can also be useful when searching for other non-book materials, by combining the title with another term, such as publisher or date.

* Note: Screenrights Agreement
Since 1 July 1990 most schools have been able to tape television broadcasts and keep a copy for educational use, under Part VA of the Copyright Act 1968. This agreement is administered by Screenrights, formerly the Audio-Visual Copyright Society (AVCS). Participating educational institutions pay an amount per student to Screenrights who then distribute the payments to copyright owners of the broadcasts.

Any school, which has an agreement with Screenrights, may tape television programs. The agreement covers all state schools throughout Australia and most non-government schools. If you are unsure whether your school is covered by an agreement, you should check with your principal. If still unsure you can contact Screenrights, tel: +61 9904 0133 or fax +61 9904 0498.

More detailed information on copyright and schools is available from most state Education Departments.

Written by Leonie Samuelsson, Cataloguing Section, Curriculum Materials Information Services, Education Department of Western Australia.

Reviews of *SCIS Subject Headings Fourth Edition*

SCIS Subject Headings Fourth Edition was published and distributed to schools in November 1999. The following reviews have been written from three different perspectives: a Teacher Librarian, a SCIS agency cataloguer assisting with content, and a SCIS unit cataloguer assisting with production.

A Teacher Librarian

My previous life must have been quite spectacular, because I seem to be paying for it now! Otherwise, why, just weeks after completing my cataloguing course at Library School, ruining my eyes and my brain trying to figure out the complexities of the *SCIS Subject Headings Third Edition*, cross-referencing it with lists of additions and amendments downloaded from the Internet and the *SCIS Standards for Cataloguing and Data Entry*, would the easy-to-read and easy-to-follow fourth edition become available? Maybe those who keep suggesting that 'God is getting even with me' know something I don't?

The fourth edition is such an improvement on its predecessor, you can almost overlook the fact that it weighs more than two kilograms. The most obvious difference between the editions is the layout. Gone are the all-upper-case entries, the mix of plain, bold and italic fonts, and those little *x* and *xx* symbols which always confused me, because I never could remember which meant 'see' and which meant 'see also' or 'seen from'.

The new look is much cleaner and the format is much easier to follow. Standard headings are in bold with regular capitalisation which makes them much easier to read, and accompanying notes are also in plain print. Each entry also has the terms 'UF' (used for); 'BT' (broader terms); 'NT' (narrower terms); and 'RT' (related terms), so it is very easy to decide which heading will best meet your needs. And for those whose brain hard-drive is getting crowded, the codes appear at the bottom of each page!

Similarly, non-standard headings are also easy to standardise and to create 'see references' which are critical if our younger students are to conduct successful searches independently. These students do not have the sophisticated vocabulary that a collection of standard headings must have, yet we must meet their needs by providing them with access to the OPAC through simpler keywords.

For instance, last year I did a unit of work with my year one students entitled 'Chooks in Books' and we read lots of stories about chickens. Many of them were keen to find out more, but were initially frustrated because they could find no entries under 'chooks' but when they tried 'chickens' they were automatically led to the standard term 'poultry' and there were all the books they wanted.

And, if you do like to indulge in a little original cataloguing rather than using SCISWeb or SCISCD, it is easy to find your way from the subject term you first entered to the correct standardised subject heading. But beware, political correctness is in, with common terms like 'Aborigines' exchanged for 'Aboriginal Peoples'. And I have just got everyone understanding that 'Aborigine' is a noun and 'Aboriginal' is an adjective! But we can take heart that 'Santa Claus' still exists and so do 'Easter Eggs'.

Anyone who has moved into an established library, where cataloguing and accessioning have been done by well-meaning but untrained people, will appreciate the value of this tool. When you find that extra hour of the day that we are supposed to have, it will prove invaluable to clean up subject files so that students and staff will make the OPAC their first stop, not their last.

And while I might gain some weight from no longer running around the shelves, a few squats with a fourth edition in each hand will soon fix that!

Barbara Braxton, Teacher Librarian, Palmerston District Primary School.

A SCIS agency cataloguer assisting with content

The new *SCIS Subject Headings Fourth Edition* is taller and thinner – an ideal proportion for some. But the hefty intellectual work of revision and restructure has had another consequence – the list has gained weight!

From a cataloguer's point of view, what has the new look *SCIS Subject Headings Fourth Edition* achieved?

- The change in format has resulted in a much more user friendly list, even for those who use it as a daily tool and contribute to its content. The change from 'x' and 'xx' symbols to standard mnemonic symbols for index terms and cross references makes the hierarchical structure of the list and allowed headings much clearer. As a result, the selection of the most appropriate subject heading for a work and the creation of new headings and their structures is easier.
- The revision of the subject headings for Aboriginal peoples was a much needed improvement. The replacement of unacceptable, outdated vocabulary and concepts has brought the list comfortably into line with community standards and the requirements of the Aboriginal studies resources that we are cataloguing.
- The expansion of the 'Guidelines for using SCIS subject headings' includes a new section (Section 5), that clarifies the instructions to cataloguers provided under subject headings. The explanations and revised instructions should help minimise the anomalies and inconsistencies on the database that result from misinterpretations of ambiguous notes.
- The expanded and additional notes and guidelines will also be appreciated by new SCIS cataloguers. The controlled vocabulary nature and structure of the list is easier to conceptualise, and the succinct section on the subject indexing process is a valuable addition.

This is not to say that the fourth edition is perfect. We have found only a few typos and omitted deletions, which is not too bad considering the major changes to the list and the feat of coordination and consensus required to harness the cataloguing expertise and editorial skills of all the SCIS agencies in an inevitably tight time frame.

The typos will be fixed in the fifth edition, along with further revisions of current headings, additions of new headings and other changes.

Reviews of *SCIS Subject Headings Fourth Edition* (cont.)

These will be required as SCIS responds to changes in information technology, education, curriculums and curriculum delivery, community attitudes and client expectations.

SCIS Subject Headings is an ongoing SCIS project – a 'work in progress' that also benefits from input from Teacher Librarians. The information in the expanded guidelines and notes should encourage Teacher Librarians to take advantage of an innovation for the fourth edition – some SCIS agency websites now provide a downloadable blank proposal form for new subject headings. We cataloguers certainly appreciate feedback.

From this cataloguer's point of view the new edition is a successful restructure. It is consistent with international standards, will adapt more easily to change and is no light weight in the arena of information retrieval systems.'

Barbara Shardlow, Cataloguing Section, Curriculum Materials Information Services, Education Department of Western Australia.

A SCIS unit cataloguer assisting with production

A few months after the release of every big hit movie, we now expect a shorter movie describing how it was made. While not equating *SCIS Subject Headings Fourth Edition* to *Titanic* or *Star Wars*, it still demanded endless attention to design and detail in its production.

The initial information was extracted from the SCIS database authority file by our systems people. This output was broken down into alphabetic sequences, to make it more manageable, and then emailed to the various agencies for comment and processing.

SCIS then hired extra staff, of which I was one, to assist with the project. Various aspects of this work were undertaken by agencies, and the files moved around by email until the final proof copies (which were committed to express snail mail). Thus, our successive 'final copies' contained 'cut and paste' from these electronic documents. However, this demonstration of our computer competency led to some interesting observations – an email never forgets! Given the least opportunity – making the smallest change to text or formatting anywhere in their vicinity, for example, the email contents immediately seized the opportunity to revert to their original Courier 10 point or similar font. We must have selected some passages and told them at least ten times, that they were 9 point Times New Roman – and they would still revert!

As we state in the Introduction (p.xxxvi), 'the revision of a controlled vocabulary is an ongoing process'. The major change in format (from *see*, *see also*, *xx* to BT, etc.) has exposed the logical structure of our thesaurus, particularly in relation to the newly created RT's. In effect, we have essentially the same information, but the 'oddities' that creep in over the years are somewhat more obvious. Revision will indeed continue, and we will keep you informed of the inevitable, on-going manipulations.

The thesaurus has historically worked on the principle of 'literary warrant' – that is, like the huge Library of Congress thesaurus (LCSH), it is based on its catalogued resources. If there is no resource that requires a particular subject heading, this subject heading will not have been established – regardless of the use of this heading with respect to logical structure.

The final print run began on a Sunday, and took several days. Pages were adjusted manually to remove orphan entries and printed in small batches. Despite the fact that every page was then scrutinised by several people some typos were missed in the final print. Some of the bloopers were detected at the printer's proof stage, which resulted in more frantic printing and rush couriers, but a few still evaded the net.

The production of the fourth edition occupied varying, but increasing numbers of people (not to mention equipment – and paper!) over most of 1999, building to a crescendo in late September. Many people contributed to this edition, which, in turn, has grown from the efforts of those who produced the earlier editions. A few of those responsible for this edition worked on the original ASCIS production, back when computers were used to print the catalogue cards (the purpose for which the MARC system was developed) – rather than being the catalogues themselves – but this is another story. Suffice to say the fourth edition is a major achievement – and we're already working on the fifth edition!

Rod Barker, SCIS unit cataloguer.

CC News (cont.)

The paper describes the Schools Catalogue Information Service (SCIS) and explains how it simplifies the cataloguing task for Teacher Librarians. The challenges of cataloguing Internet and other digital resources are also addressed.

6. Britannica.com

Curriculum Corporation's website has been nominated by Britannica Online as one of 'The

Web's Best Sites' and given a rating of 4 stars (superior). This is an outstanding recommendation to schools worldwide to consider using our products and services.

'Curriculum Corporation Rating: * * * * Australian government initiative for developing curriculum and producing high quality print and electronic resources. Provides links to major projects and products, including the Schools Catalogue Information Service (SCIS),

Education Quarterly, and the following comprehensive teaching units: Access Asia, Science Australia, Enterprise Education, and Technology Education. Contains PDF downloads of primary and secondary catalogues and information about OZJAC, a database linking courses to jobs.'
<http://search.britannica.com/bcom/search/results/1,5843,,00.html?p_query0=curriculum%20corporation>

Metadata (part 3) (cont.)

A process of awareness-raising and training internationally, nationally and locally would support wider acceptance and knowledge of the revised standard. Development of training packages would support consistent and accurate metadata application and tools provide the possibility within this national approach, for States and Territories to mandate particular fields or emphases if required. Participating in such programs would enhance the consistency of metadata nationally and support the EdNA Metadata Standard, in all versions.

Copyright and intellectual property issues

With the development of national projects and the trend towards online resource sharing, the development of copyright standards and protocols for this area are essential to protect locally produced materials. Future revisions of the EdNA Metadata Standard will be designed to accommodate the copyright and intellectual property standards and protocols that are still in development to address these complex issues.

Formal processes to progress these outcomes will be through the EdNA Schools Advisory Group and EdNA Reference Committee.

Further metadata information

International metadata development reference sites include:
- Dublin Core Metadata Initiative (DCMI), 1999
  <http://purl.oclc.org/dc/>
- The Gateway to Educational Materials (GEM), *The GEM Element Set and Profile(s) Workbench*
  <http://geminfo.org/Workbench/Metadata/Vocab_Type.html>

Australian Metadata reference sites include:
- Education Network Australia (EdNA), *EdNA Metadata Homepage*
  <http://www.edna.edu.au/metadata>
- National Archives of Australia. *Australian Government Locator Service (AGLS)*

<http://www.naa.gov.au/govserv/agls/user_manual/AGLS_metadata_elements.htm>
- Tasmania. Department of Education. *Tasmanian Metadata Guidelines, vol. 2.*
  <http://www.tased.edu.au/tasonline/metadata/index.htm>

Written by Heather Watson, Manager, Electronic Development, Curriculum Corporation.

Heather has been a teacher, consultant and project manager developing curriculum and education resources. She has worked in state and national programs including managing projects with print and electronic outcomes. Her work includes defining strategies to develop and disseminate electronic content to enhance learning, in professional development and student programs. She is a member of the EdNA Reference Committee Standards Sub-Committee, the EdNA Metadata Standards Working Group and the School Metadata Consultative Group.

A Question of Technology?

Dr. Jamie McKenzie is well known to Australian teachers for his knowledge of information technologies in education and their potential to transform student learning, classrooms and schools. He supports student-centred, engaged learning, with his approach informed by 30 years of experience as a teacher, principal and director of libraries and technology. He has created a collection of easy-to-read essays and articles available in two volumes, to equip educators and teachers to understand the potential of learning and communication technologies implemented in classrooms.

Schools have invested substantial resources in computer hardware, software and Internet connections. Jamie McKenzie proposes this now needs to be balanced against two critical elements, a clear focus on program goals and providing extensive professional development opportunities for all teachers.

How Teachers Learn Technology Best by Jamie McKenzie Ed.D. provides successful strategies to integrate electronic tools into classroom practise to improve student learning.

The first section of the book, 'A Question of Purpose', addresses the core issue of how to use technologies to deliver on their primary mission – effective teaching. The second section, 'A Matter of Strategy', outlines an approach to designing adult learning experiences applicable for schools implementing professional development programs for teachers.

Beyond Technology: Questioning, Research and the Information Literate School by Jamie McKenzie Ed.D. emphasises a central purpose of schools as improving the reading, writing and thinking of their students, and advises against being distracted by a focus

on the wires, cables, laptops and desktops associated with technology.

This collection of articles examines the advantages of learning and communication technologies to engage learners and improve their learning through skills of critical literacy and effective information management.

The articles, presented in three sections – 'The Primacy of Questioning', 'The Research Cycle' and 'Research Modules', provide practical steps for teachers to guide their students through questioning and analysis to achieve higher level thinking, problem-solving and decision-making skills.

For further details contact Curriculum Corporation, Sales Department, tel: 1800 337 405 or (03) 9207 9600.

Internetting Corner

The following websites can be easily accessed on the Internet via the links found on Curriculum Corporation's Connections website for Issue No. 33. <http://www.curriculum.edu.au/scis/ connect/connect.htm>.

Archives of Australia
<http://www.archivenet.gov.au/jsredirect.exe>
Australian archive related sites and resources are available from this website, jointly developed by the National Archives of Australia, the various State and Territory archives and other significant archives. Additional links are available to international archive sites.
SCIS: 995727

Cells Alive!
<http://www.cellsalive.net/>
The life, death and interaction of a large variety of cells are displayed using a visually stunning combination of different types of photography (biocams and micrographs), diagrams, animation and text.
SCIS: 995758

Food Safety Net – Education Pages
<http://www.safefood.net.au/index.cfm>
Most aspects of food safety and handling are addressed on this Australian website which is administered by the Food Safety Campaign Group. Content includes information about food-based diseases, additional resources, and industry links.
SCIS: 995791

International Year for the Culture of Peace
<http://www.hi.is/~anne/culture_of _peace.html>
The year 2000 has been selected by the United Nations as the International Year for the Culture of Peace. To assist Teacher Librarians locate resources, the International Association of School Librarianship (IASL) has created this website, with links to a variety of international curriculum units.
SCIS: 995800

Maps @ nationalgeographic.com
<http://www.nationalgeographic.com/ resources/ngo/maps/>

This offering from the National Geographic Society will appeal to geography students or those with an interest in cartography. The software underpinning the site enables users to load a variety of map types (for example, satellite, atlas), to zoom in or out, and add additional data. Flags and facts for 191 countries are also available.
SCIS: 996052

Math in Daily Life
<http://www.learner.org/exhibits/dailymath/>
Probability, ratios and exponential growth are related to real world settings to assist secondary students to understand the importance and relevance of mathematics in their daily lives.
SCIS: 995830

National Science – Technology Roadshow
<http://roadshow.science.org.nz/resources/ scientists//>
Information on the careers and achievements of ten of New Zealand's scientists and technologists is available from this site. Classroom activities and the relationship to the New Zealand Curriculum Framework Document are included.
This URL has a redirection on it to < http:// www.roadshow.org/resources/scientists>.
SCIS: 995836

NATSIEW
<http://www.natsiew.nexus.edu.au/ splash2.html>
The National Aboriginal and Torres Strait Islander Education Website (NATSIEW) includes an extensive database of culturally appropriate resources that can be searched online. The site is an initiative of the National Coordinators of Aboriginal Education.
SCIS: 995837

No Bully – Guidelines for Teachers
<http://www.nobully.org.nz/guidelines.htm>
Part of a comprehensive site regarding bullying, bullies and victims, this information is pertinent to teachers wishing to implement whole school change to alleviate the problem.
SCIS: 995861

New Zealand Ministry of Education
<http://www.minedu.govt.nz/>
This recently redeveloped site includes information and links to official policy, learning areas, Maori education, special education, employment, research and publications.
SCIS: 995910

NSW HSIE Units
<http://www.educate.net.au/hsie_units/>
Aimed at NSW K-6 teachers who are introducing the new Board of Studies HSIE (Human Society and Its Environment) syllabus, this site is of potential use to other education systems where similar topics are covered. A variety of units are available that can be modified for individual school needs. Topics include Bali, gold, government, shelter, Antarctica, rainforests and early settlement.
SCIS: 995908

Pirates!: Fact
<http://library.thinkquest.org/16438/pirate_fact .shtml>
Almost everything primary and junior secondary students would want to know about pirates is contained in this encompassing site. Content includes maps, bibliography, types of piracy, facts and legends, literature and general history.
SCIS: 995934

Stories of the Dreaming
<http://www.dreamtime.net.au/main.htm>
A collaborative site developed by the Australian Museum and Australia's Cultural Network that contains stories from the culture of indigenous Australians. The significant aspects of storytelling and custodianship are explained and the stories are available in text, audio and video formats.
SCIS: 995941

Reviewed by Nigel Paull, South Grafton PS.

The websites 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. Remember the links, content and even the address of a site may change quickly.

What's New?

1. SLAQ 2000 'Frontiers of Learning'. Proudly sponsored by accessED and Karen Bonanno & Associates.

Have your registered for SLAQ 'Frontiers of Learning', the 7th Biennial Conference of the School Library Association of Queensland? It will be held from 3- 5 July 2000 at Grace Lutheran College, Redcliffe City, twenty minutes north of Brisbane. Curriculum Corporation are pleased to announce their involvement in this conference with two presentations and a stand at the trade fair. SLAQ have established a reputation for excellence in conferences, and SLAQ 2000 should prove to be no exception with presenters including:

- Suzette Boyd, Methodist Ladies College, Victoria
- Dr Ross Todd, University of Technology, Sydney
- Rupert McCall, poet and TV presenter
- Michael Salmon, popular children's author and illustrator
- Gary Crew, author
- Mary-Ann Salisbury, President, SLAQ
- Bruce McDonald, accessED
- Dr Kerry Mallan, Queensland University of Technology
- Angela Vilkins, Interchange Management
- Karen Bonanno, Karen Bonanno & Associates
- John Shield, storyteller.

The presenters will cover areas such as Management and Leadership, Advocacy, Information Literacy, Information Technology, Knowledge Management and Children's Literature – there is something to interest everyone. The program includes a dynamic mix of paper presentation, hands-on workshops and discussions, as well as a one day trade fair of the latest educational resources with many give-aways, special offers and one-off deals as well as fun, stimulating social activities. There will be book signings and opportunities to purchase original children's book illustrations as well as the wonderful food that SLAQ conferences have become famous for!

For a copy of the registration brochure, or for further information, please contact Conference Secretariat, Sally Fraser, PO Box 252, Mt Gravatt, Qld 4122.

Tel: (07) 3349 3815, fax: (07) 3219 2077, email: sefraser@star.brisnet.org.au, website: <http://www.pukpuk.com.au/SLAQ/slaq_2000.htm>.

Register before 31 May 2000 to go into the draw to win a copy of *SCIS Subject Headings Fourth Edition* valued at $90.00.

2. Video Education Australasia

SCIS has undertaken to catalogue all videos distributed by Video Education Australasia (VEA). The majority have now been catalogued, however, if there is no record for a particular video when searching the SCIS database, please forward the item to a SCIS cataloguing agency.

It is usual to search SCIS OPAC for these titles, however, there is a spreadsheet on our website with the titles and SCIS numbers at <http://www.curriculum.edu.au/scis/catalog/video.htm>. This alphabetical listing may be of value when SCIS record numbers are required for cataloguing large collections of videos. It is possible to search for both title and series title in this list.

Video Education Australasia, producer and distributor of high quality educational multimedia, has been established for over 21 years, and operates from a Head Office based in Bendigo, in country Victoria. Kerri Carr from VEA says:

'VEA is pleased to work in partnership with Curriculum Corporation, providing educational resources for cataloguing onto their database. This provides access to cataloguing data for Teacher Librarians who purchase our programs, as well as valuable information when searching for new resources. VEA will be gradually adding SCIS numbers to our products and promotional materials, which will be of benefit to library staff.

If you have any suggestions on how we can provide additional services to you, or suggestions for new products, please do not hesitate to contact us via email: <vea@vea.com.au> or freecall 1800 034 282. We look forward to hearing from you in 2000.'

3. Review of library automation systems

SCIS customer support staff are often asked by Teacher Librarians to recommend a library software system. It is SCIS policy to refrain from commenting about the advantages and disadvantages of the various systems. However, in order to assist Teacher Librarians with the selection of a new software system for their school, Curriculum Corporation intends to publish information on its website at <http://www.curriculum.edu.au/scis/links/software.htm> which may assist schools with their selection.

Recently an evaluation of library software systems was undertaken by Curriculum Materials Information Services, Education Department of Western Australia. This report is located on their website at <http://www.eddept.wa.edu.au/centoff/cmis/cat/mrr.htm>.

A report completed by the Victorian Department of Education in 1998 is located at <http://www.sofweb.vic.edu.au/itb/libryrpt/index.htm> and would provide further information.

4. The great divide? Physical and digital resources in school libraries

School libraries face an increasing challenge to meet the needs of their users for integrated access to all resources – physical and digital. Worldwide there is increasing use of the concept of 'hybrid libraries' to describe the integration of access to physical and digital resources.

At SCIS we are grappling with the issue of school libraries' need to include Internet resources in their library catalogue – see articles in this issue of *Connections* on the inclusion of catalogue records of websites on SCIS. Also, Curriculum Corporation and Education.au (which manages EdNA Online) have identified as an issue the need to enable schools to easily search both catalogues of physical resources (the traditional library catalogue) and directories of Internet resources, such as EdNA Online.

Further information on 'hybrid libraries' will be in the next issue of Connections.

Reviews

◆ book ● CD ◆ video ▤ report

Science Australia 1 and Science Australia 2

ISBNs: 1 86366 390 8 and 1 86366 391 6
Publisher: Curriculum Corporation
RRP: $31.95 each volume

Science Australia 1 is intended for year 7 students, and consists of eight chapters spread over 216 pages, including a comprehensive index. The chapters cover an introduction to science and scientific techniques, physical geology, energy, matter, the solar system, living things, sources of energy and biological classification and the history of life.

Science Australia 2 is intended for year 8 students, and consists of eight chapters spread over 270 pages, including an index. The chapters cover cells and microscopy techniques, matter and changing state, movement, natural resources and mining, transport in living things, acids and bases, ecology and electrical circuits.

The publisher states that the text was developed along constructivist lines and that each chapter addresses specific learning outcomes. Extensive support for uses including links, between the text material and the WA Outcomes, is available at the publisher's website <http://www.curriculum.edu.au>. I strongly encourage potential users to check this out.

The text is highly readable and very colourful. Colour diagrams are profuse and some parts of the text are colour coded, too. For example, 'activities', which require little preparation, are printed on a green background; 'inquiries' which use more elaborate equipment are printed on a light blue background; 'extensions' or research projects are printed against a darker blue background.

The design avoids large areas of text. Written material is invariably broken up with diagrams, inquiries, activities and the like. In all, *Science Australia* is a friendly and engaging text.

The text in detail

Science Australia is definitely put together from a constructivist perspective. The authors have taken great care to make each entry relevant to students by setting the science in a real-life context. Each chapter opens with an activity that sets the scene and allows students to explore their prior knowledge. As the students proceed through a chapter, later material refers back to this context-setting activity. Each activity or inquiry is carefully integrated with the text material. There is also cross-referencing between chapters, so students are encouraged to go back to an earlier section to brush up on their skills if necessary.

Investigations such as activities and inquiries tend to be free from, rather than prescriptive in nature, with students often being directed to apply what they have learnt in order to set up equipment or process data. Instructions, where given in detail, often combine texts and diagrams in easy to follow flow charts. Once data has been gathered, students often need to make inferences and integrate material from the text in order to tease out the meaning of the results.

In summary

The writing team has created a user-friendly and attractive set of books. There are glitches, of course. No large expository text can avoid misleading or even completely wrong statements, and *Science Australia* has a few. For example, star clusters are described as comprised of stars that are not actually associated, whereas constellations (by inference) contain stars that are spatially associated. The reverse is true, however. Confident users will have no difficulty in dealing with such occasional minor problems.

Such errors may arise in part from the difficulty of simplifying complex ideas (as the renowned physicist and teacher Richard Sears once wrote, 'Teaching thermal physics is as easy as a song. You think you make it simple when you make it slightly wrong'). The error level is entirely acceptable, given the advantages the text offers over the competition.

I can recommend this pair of texts without hesitation to any teacher wishing to provide middle school learners with attractive, engaging texts that conform to constructivist principles and connect well to the Curriculum Frameworks and Student Outcome Statements.

Reviewed by George Przywolnik, Penrhos College, Western Australian
SCIOS – Journal of the Science Teachers' Association of Western Australia (Inc.), (Volume 34, Number 3, Spring edition 1999).

Available from Curriculum Corporation:
Tel: 1800 337 405 or + 61 3 9207 9600,
Fax: +61 3 9639 1616
Email: sales@curriculum.edu.au.

Cataloguing News

1. New Subject Heading Proposal

We encourage Teacher Librarians to use the New Subject Heading Proposal form to assist the SCIS team in ensuring that headings are kept up to date and relevant. A sample of a completed New Subject Heading Proposal form can be found on our website at <http://www.curriculum.edu.au/scis/database.htm>.

Refer to the websites of the following agencies for further information:
Western Australia Agency
<http://www.eddept.wa.edu.au/centoff/cmis/cat/nsh.htm>
New South Wales Agency < http://www.dse.nsw.edu.au/staff/F1.0/F1.8/scis/index.htm >.

2. Amendments to SCIS Subject Headings Fourth Edition

We will continue to advise schools in each issue of *Connections* newsletter about new, amended and replaced subject headings to the *SCIS Subject Headings Fourth Edition*. In addition, we will publish a list of the changes as they are approved by the agencies on our website at <http://www.curriculum.edu.au/scis/database.htm> to allow schools immediate access to the information.

3. New, amended, replaced subject headings

Below is a list of new subject headings created at recent meetings of the national SCIS Cataloguing Agencies.

Anabolic steroids
BT   Drugs
       Drugs and sport

Goods and services tax
May subdiv. geog.
UF   GST
       Value added tax
       VAT
BT   Taxation

Mixtures (Chemistry)
UF   Mixtures
NT   Colloids
       Rocks
RT   Separation (Chemistry)
       Solution (Chemistry)

Separation (Chemistry)
UF   Separation
BT   Chemistry – Experiments
NT   Chromatography
RT   Mixtures (Chemistry)

Warm-blooded animals
UF   Endotherms
BT   Animals
NT   Birds
       Mammals
RT   Cold-blooded animals

The following existing headings have had new references added as a result of these decisions:

Animals
NT   Warm-blooded animals

Birds
BT   Warm-blooded animals

Chemistry – Experiments
NT   Separation (Chemistry)

Chromatography
BT   Separation (Chemistry)

Cold-blooded animals
RT   Warm-blooded animals

Colloids
BT   Mixtures (Chemistry)

Drugs
NT   Anabolic steroids

Drugs and sport
NT   Anabolic steroids

Mammals
BT   Warm-blooded animals

Rocks
BT   Mixtures (Chemistry)

Solution (Chemistry)
RT   Mixtures (Chemistry)

Taxation
NT   Goods and services tax

Pending Subject Headings (feedback welcome):
Assessment (Education) (as a subdivision)
Genocide
Globalisation
Remedial teaching (review of the use of this heading)
States of matter
Tsunami
Ultraviolet radiation

4. Email contact for National Coordinator Cataloguing and Metadata

Teacher Librarians are encouraged to email the National Coordinator Cataloguing and Metadata at <catinfo@curriculum.edu.au> to propose new subject headings, to provide feedback about cataloguing, to report any errors noted in catalogue records and to discuss relevant cataloguing issues.

5. SCIS article in Cataloguing Australia

Cherryl Schauder, National Coordinator Cataloguing and Metadata, has an article 'SCIS Subject Headings, New Edition: Challenges and Directions' in the periodical *Cataloguing Australia,* volume 24, published by Australian Library and Information Association. We have permission from ALIA to make the article available for Teacher Librarians on our website at <http://www.curriculum.edu.au/scis/database.htm>.

NEW SUBJECT HEADING PROPOSAL

Teacher Librarian _____

School _____

Address _____

Tel _____ Fax _____

Email address _____ Date _____

1. SUGGESTED NEW SUBJECT HEADING

_____
_____

2. ALTERNATIVE VERSIONS/WORDS OR PHRASES FOR THE CONCEPT

_____
_____
_____

3. RATIONALE FOR ADDING THE HEADING

(For example, evidence of a need for the heading in terms of numbers of new resources which would need the heading; sample titles which would be assigned the heading.)

_____
_____
_____
_____
_____
_____
_____
_____

4. CLOSEST EXISTING HEADINGS IN *SCIS SUBJECT HEADINGS FOURTH EDITION*

(Existing headings from the list which are close in meaning or which might be associated ie broader, narrower, related terms.)

_____
_____

5. OTHER COMMENTS

_____
_____
_____
_____
_____

Please fax to one of the following:
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Queensland: (07) 3406 2465
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