Engaging girls in STEM

It seems recently that everywhere we turn we read about girls and science, girls and technology, and girls’ career choices. It is a popular theme in the media, which extends also to social media. A search of Twitter on the hashtag #stem reveals a high proportion of photos and links that relate to girls and women. From the Chief Scientist to executives in the gaming industry the message is ‘where are the girls in STEM?’ Increasingly this concern is broadening to encompass all students, as overall engagement in science, mathematics and technology falls.

In August, as we celebrated National Science Week and Children’s Book Week, we were prompted to consider what role the school library could have in igniting interest in science and technology, particularly amongst girls. While the Book Week theme ‘Books light up our world’ linked neatly to this year’s International Year of Light (www.light2015.org), can libraries...
Engaging girls in STEM (cont.)

build on this, and develop services that support school, system and national STEM priorities.

What is STEM?

STEM is used as an umbrella term to refer to Science, Technology, Engineering, and Mathematics. It became a trend early in the 21st century and has a consistent aim to hold together the non-arts and humanities disciplines. The Science and Mathematics parts of STEM need little explanation. Technology in STEM encompasses both the Technologies learning area and Information and Communication Technology (ICT) capability. While there is no subject called Engineering in most school curriculum frameworks, its central pillars of problem solving, research, planning, designing, and building are readily recognised through other learning areas. A search of the Australian Curriculum for ‘engineering’ returns relevant results in Technologies (24), Science (17), and Mathematics (2). There is a wealth of literature and resources available about STEM education. One key point is that for most writers STEM is about integration of these four disciplines in an interdisciplinary approach. There is also a movement that advocates the inclusion of Arts in the mix, preferring the idea of ‘STEAM’. Whatever the line, the theme has ignited an enormous range of initiatives, funded by governments, commercial giants, philanthropists and grassroots organisations, all looking to solve a perceived problem.

Where is the research?

Given the amount of material published about STEM education, and the frequent references to ‘gender gaps’, the theme has been a focus of girls and women across a range of endeavours, it is surprising how little in-depth research there has been in Australia in recent years. Library staff at ACER recently reviewed research in the Australian education literature from 2011 onwards to find research into ICT and gender, looking to identify any policies, practices, and programmes in Australia that focus on ICT, education, women, and/or girls. While this research was specifically about ICT in education, it is a useful place to start as the literature on STEM in Australian education is more limited. Two Australian reports are reviewed here.

JICT Skills and Training Development: A state of play paper by the Australian Information Industry Association (2012) addresses issues at different levels of education related to lack of females in the industry. The statistics it makes available are disheartening (p.8). The report suggests that there may be a ‘branding problem’, related to how girls are marketed within education and training (p.7).

The Digital Divas project was a 2009-2011 ARC Linkage project conducted in schools by researchers from Monash, Swinburne, and Deakin Universities. The final project report (2012) suggested multiple contributing factors to the low participation by females in ICT. At the individual level many girls lacked confidence, knowledge of careers, game playing experience, and parental advice. In their educational institutions it was often regarded as atypical for girls to be interested in these subjects, and both the curriculum and teachers were found to be potential factors. The public image of the ICT profession was an issue, seen as having an alienating culture, involving constant change and being somewhat unstable as a career option (p.6). Digital Divas course materials are available online for use by schools: http://digitaldivasclub.org/vic/

What does testing tell us?

In the 2013 paper Australian students in a digital world (http://research.acer.edu.au/policyinsights/3), Dr Sue Thomson summarises the findings related to the gender from several large scale assessment programs. She concludes that, ‘despite their obvious aptitude, female students in Australia reported significantly lower levels of interest and enjoyment in using computers than male students’ (p.15).

Where to from here?

The Australian state of affairs concerning girls and technology in particular, and STEM in general. There have been many billions invested in programmes looking to change the situation. The real challenge is to go beyond studies of what is happening, to determine why girls are opting out. This appears to be one of those ‘nicked problems’ for which there is no quick fix. If a solution existed, surely one of these studies or programmes would have found it.

However, this conclusion is no excuse for giving up on the goal of better representation of girls in STEM endeavours. Campbell (1996) writing about engineering education in the tertiary sector concludes that ‘failure to solve the attrition problem stems partially from an overemphasis on the student deficit model and under emphasis on institutional deficiencies’. So rather than looking at girls as the problem, let’s look at what we are offering girls in terms of STEM.

Seven STEM steps for school libraries

After reading this research, we suggest a number of areas where school libraries might contribute to their school’s STEM programmes.

1. Prioritise STEM

Science, Mathematics, and Technologies are significant learning areas in most current curriculum frameworks. However, probably they do not attract equal time and attention in library programmes.

2. Prepare for Technologies curriculum

There are many areas of expertise in information–literacy, school libraries have been closely connected to the ICT general capability. Now the Australian curriculum: Technologies is available, and implementation is imminent—or underway in some places—it represents an opportunity for schools. Teacher librarians can work with technology specialists, skilling up in this area, and provide support to the teaching of the Digital Technologies and Design and Technology subjects.

3. Source STEM resources

An obvious role for the library is to engage access to resources that support STEM curriculum and extension initiatives. Subscriptions to quality publications for students and teacher reference are essential in this fast moving area. Genres such as science fiction and steampunk are a starting point, and checking the SCIS Catalogue for STEM-related subject headings with a fiction subdivision can provide ideas for building the collection.

Visual resources are useful for engineering-related topics, including photographs, plans, and video of objects in natural and built environments. Accommodating learning activities and assessment that go beyond text production will involve researching software that is accessible for students to use for brainstorming, designing, drawing, and developing flowcharts.

4. Build partnerships

STEM is an area where local industry programmes may contribute, as a child’s schooling compared to Arts, Language, Literacy, Humanities and Social Sciences. The Chief Scientist and Researcher is understandably forthright in what is required, including a core STEM education for all students—encompassing inspirational teaching, inquiry-based learning and critical thinking—placing science literacy alongside numeracy and language proficiency as a priority’ (Chubb, 2014, p.23).

5. Promote STEM

While STEM education is about more than girls choosing careers in this area, it is nevertheless a highly visible measure of success, and is a goal of many programs. Myfuture lists 269 results for ICT related courses and resources, and provides in-depth information—such as the Biulye poster for computing (http://myfuture.edu.au/tools-and-resources/ bulletin-boards-posters-explore-occupations-by-school-subject/computing) is an easy first step in starting to consider the range of options that STEM opens up.

Careers resources are one strategy, but research shows that post Year 9 is too late to start changing girls’ perceptions. Openness to STEM careers for girls is needed even younger than traditional career education units.

This is an excellent opportunity for primary libraries. The library can host after school or school holiday STEM or coding programs with male and female tutors, such as the one run by Victorian-based organisation Invent the World (inventtheworld.com.au). This allows girls to have female role models actively working in STEM.

6. Make space for STEM

Maker spaces are one increasingly popular response to enabling and encouraging learning and thinking–placing science literacy alongside numeracy and language proficiency as priorities. Role models and mentoring are acknowledged as success factors in the research, addressing issues such as self-confidence and knowledge about careers. One strategy is a living library program where students can interview women who are successful in roles involving science, technology, engineering, and mathematics, and are comfortable sharing their own story.

7. Read and research STEM

In a field such as STEM it is essential to be reading, debating and updating our knowledge and resources. The free online publication ‘Teacher’ (http://www.teachermagazine.com.au) has independent, evidence-based articles that are practical and easy to read. STEM is one of their regular themes. A school subscription to the Digital Education Research Network (DERN) will give all teachers access to a weekly newsletters and research reviews. Check out the full list of reviews on Girls in ICT (https://dern.acet.edu.au/dern/category/180). Finally, if you undertake a successful STEM activity or some action research into STEM and technology at your school, please consider publishing your findings in Connections or Teacher so others can build on your work.

References


Images

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Transmedia storytelling: narratives like real life

What is Transmedia Storytelling?

“a process where integral elements of
a fiction get dispersed systematically
across multiple delivery channels for
the purpose of creating a unified and
coordinated entertainment experience.”

http://www.pil-network.ie/blog/
transmedia-storytelling/

In 2012, the show I watched more than any other on free-to-air television was a small web series called The Lizzie Bennet Dairies. At the time it was a modernised adaptation of Pride and Prejudice, where Elizabeth (Lizzie) Bennet was a vlogging graduate student and Darcy an executive at an internet company, Pemberley Digital (which is also the name of the company who produced the show). This may not sound like much to a die-hard Jane Austen fan but the series worked, and worked well. The show won a Primetime Emmy Award for Outstanding Creative Achievement in Interactive Media, and when a Kickstarter campaign for the DVD was announced, over 7,000 people subscribed, raising 700% more than the required budget. I received my DVD in the mail and I can’t wait to watch it again.

Part of the adaptation’s appeal was its transmedia platform. You didn’t just subscribe on YouTube and watch an episode every 3 days; you also followed on Tumblr to view photographs of the fashions, and on Twitter you could read conversations between the characters. It was a cross-internet series that could also be interactive. There were Q&A videos where the characters answered questions sent in via Twitter or Facebook, and some characters even had their own spin-offs; Better Living with Collins and Collins’ is highly recommended. Pemberley Digital has followed this on with more web series, including Emma Approved—where life coach Emma Woodhouse tries to fix everyone’s life—which won several Streamy Awards. The adaptation and cross-platform approach is clearly working. I have managed to get a few teachers and students addicted to the shows, even watching interviews with the actors talking about the adaptations.

Their latest offering is based on the often studied text Frankenstein by Mary Shelley. The gender-swapped Frankenstein M.D. will be a change to most, but it also presents a much easier entry into Gothic horror for our students. The literary traditionalists can still have their debates in the comment sections, or watch Iggy (think Igor), Victoria Frankenstein’s much put upon lab partner, question if they should be messing with the forces of life itself.

This type of series is full immersion storytelling, the likes of which no television channel has yet got right, and it is freely accessible to anyone with the internet. It is well done, open to debate, produced in a medium that people use daily, and available on demand. Don’t be surprised if you see Pemberley Digital Studios popping up on traditional television soon, and be disappointed if they are not part of your school’s English syllabus even sooner.

Screen shot of Twitter from The Lizzie Bennet Diaries

The only example of transmedia storytelling I have seen on Australian television to date is ABC’s Q&A. Viewers are encouraged to propose questions for the panel in advance, and to ‘join the discussion’ via a live Twitter feed, which scrolls along the bottom of the screen as the show is broadcast. These Twitter interactions can provide real-time consequences on the show, and often cause debates in the next day’s newspapers or radio shows, which are then responded to in press releases by the ABC on all of its platforms. Some sport shows also offer these interactions but no dramatic narrative has managed to cross over to the transmedia space.

Q&A works well as a transmedia platform, because real life is transmedia. When a story happens in real time, we can view news updates on television, hear them on the radio, watch them fill our Facebook feeds, and then read serious commentary based in the newspaper. Students are used to this now, and so it is very effective when done well, because students engage both with the texts and with each other.

Teachers have always experimented with cross media learning. Almost every year I help students in the library who are creating a newspaper article based on a novel they are reading in class, or proofread letters they have written from the story back to you, and you then have more information when you go back to the story. Furthermore, you can also see viewers or students commenting on the action in their own feeds.

Imagine a class studying Jane Austen’s Pride and Prejudice through the Youlbe episodes of The Lizzie Bennet Diaries: The teacher could set up a Twitter feed (in accordance with the school’s social media policy, of course); play each episode in class, or set them as homework, and then retweet the original tweets from the series to the class at the appropriate intervals. Students with Twitter would then regularly read part of the story in their own feeds, as if the conversations were happening between people they followed.

This could be done by any teacher or library staff member for any book read with a class: read chapter by chapter, then create Twitter accounts for the characters, and have them converse this way based on details from the text; or create Tumblr posts offering photographs of the characters fashion and meal choices. Students would be encouraged to follow, ask questions of the characters, and even create their own fan art or fan fiction. There are already a number of blogs and books available to interested parties, but to truly understand transmedia storytelling I recommend that you find some examples online—start with Pemberley Digital (www.pemberleydigital.com/)—and then explore.

Elements of Transmedia Storytelling.
1. Pervasive: the story is available on multiple devices, anytime and anywhere. Reality and fiction are blurred.
2. Persistent: the story evolves even if the author isn’t engaged with it. Audience activity and real world factors shape the story development.
3. Participation: the audience is able to interact with story characters, locations and each other.
4. Personalised: the audience can personalise their experience with the characters and environment.
5. Connected: a seamless, integrated experience is available to the audience.
6. Inclusive: the experience is available across a range of devices and engagement styles so that it is not just confined to expensive smartphones or tablets.
7. Cloud-based: the experience is managed from the cloud to permit the other 6 stands to function in real time.

(From the storyteller Blog, http://www.tstoryteller.com/blog/)

Where has it been done?
Liverpool Girls High developed a pilot programme in 2013 and presented their project at the Inspire Innovative Conference.

The slideshow can be viewed here: http://www.slideshare.net/cathieh/rethinking-literacy-through-transmedia-storytelling

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Further Reading


Image credit: Images © 2013 Pemberley Digital. All rights reserved.
Computational thinking as the ‘new literacy’: professional development opportunities

Children not only need to learn about how digital technology works and how to use it, but also how to create it by understanding the language of computers. Here we describe our experiences in providing the Computer Science Education Research (CSER) Digital Technologies MOOC—an open, online course designed to support teachers in the new Digital Technologies learning area.

Why is this essential?
A decade ago, Information and Communication’s Technology (ICT) education generally focused on ICT as a tool, to be understood through the development of digital literacy. Areas such as Computer Science (CS) or Computational Thinking (CT) were typically isolated into senior secondary programs, with little or no programming, and algorithm development, when they were considered at all.

More recently, a drive to include computing in the school curriculum has arisen, proposing that all children should have an opportunity to develop CT skills, and have opportunities to be creators of digital technologies (Gander et al., 2011; The Royal Society, 2012). New curricula introduced in England (Department for Education, 2013), Australia (ACARA, 2012), New Zealand, and the new Association for Computing Machinery CS standards in the United States (Seehorn et al., 2011), have identified the need to educate for both digital literacy and CS, and have an opportunity to develop CT skills, as a tool, to be understood through computational thinking.

Areas such as Computer Science (CS) or Computational Thinking (CT) were typically isolated into senior secondary programs, with little or no programming, and algorithm development, when they were considered at all.

The CSER Digital Technologies MOOC
In December 2014, the CSER Group at the University of Adelaide, with the support of Google, launched the CSER Digital Technologies MOOC. This open, online course, freely available to teachers and the broader community, was designed primarily to support teachers from Foundation to Year 6 in teaching the new Digital Technologies learning area of the Australian Curriculum. It offered teachers suggestions on how coding can be integrated into their lessons; during the course participants prepared a portfolio of resources and classroom activities for potential use in their own and other classrooms.

In response to existing research findings, the learning and teaching opportunities in the course were designed to be tool-independent, and focused on deep learning (Black et al., 2011, Meebum-Salant et al., 2011). The course was also designed to reduce teacher workload by providing examples of activities that were already integrated with existing knowledge areas in the curriculum (Settle et al., 2012). In preparing the course we drew on and adapted existing lesson ideas from organisations and initiatives such as CS Unplugged and Code.org, and also drew on lesson ideas and approaches from education texts in other learning areas, such as mathematics, science and literacy, and with examples from teaching themes commonly used within Foundation to Year 6.

Being online, the course provided professional development opportunities at a time and in a location that suited the individual. At the same time, we were conscious of the need to develop a sense of community and sustainability in sharing resources. To support this, a significant aspect of our online course structure was the introduction of a Google+ Community, this community participants shared their ideas for learning activities in response to their weekly assignments.

We have just completed our second offering of the CSER Digital Technologies MOOC. To date, over 3,000 teachers have undertaken the MOOC, with approximately 200 teachers requesting and receiving professional development certification for their participation. Over 1,100 teachers have participated in developing the online community, supporting the discussion of pedagogy and learning activity ideas for Digital Technologies, while also providing an online resource for brainstorming and sparking ideas.

In our discussions with this growing community, several key considerations have emerged. It has become very clear that, as a new learning area, Digital Technologies is a source of anxiety for many teachers. However, once concepts such as ‘algorithms’ and ‘iteration’ are demystified, teachers become far more comfortable with the new curriculum. As one teacher said to us, ‘nearly all the modules were relevant in name but as I started to go through the MOOC I realised there was so much that I already did and understood. The importance of a sustainable community cannot be emphasised enough in the success of this course. Some teachers have initially felt hesitant to share their ideas, but these fears have soon broken down, and the sharing of ideas has become a great source of motivation and inspiration.

As we work together through our next offering of the course, it quickly became apparent that those most engaged in course materials were also the ones most strongly supported by their peers in face-to-face contact. It has now become common for teachers to study the course in small groups, and in some cases these groups have been facilitated by schools. More detail on the analysis of our first offering of the course is available elsewhere (Vivian, Falkner & Falkner, 2014).

Where to next? The CSER Group, with the support of Digital Careers and Google, has launched a second MOOC in support of teachers. The CSER Next Steps MOOC is designed to support teachers of Years 7 and 8, and takes a more project-based approach. The course is divided into several streams that cover a range of contexts, including robotics, mobile app development, maker spaces, data visualisation, and making digital games. The streams are designed to support a range of background experience: some build upon visual programming languages and are well suited to those with little prior experience, while other streams explore general-purpose programming languages.

References

The SCIS cataloguing team regularly source, receive, and catalogue a range of print and electronic resources suitable for use in school libraries. Electronic resources include websites, apps, and ebooks, and are available for SCIS subscribers as easily downloadable files using the Special Order Files page of our website. We often receive questions about how websites are catalogued by the SCIS team, which we have endeavoured to answer for you here.

Frequently asked questions about website cataloguing
Where does SCIS source websites from?
The SCIS cataloguing team only catalogues websites that are curriculum-related, have been through a quality control process, or have been published in reviews or listed in appropriate educational sources such as ABC Splosh, Connections, Scan, or Education Department evaluations. We only catalogue websites with expiry dates if they are of a popular topical subject—for example, the Olympic Games.
Let’s talk about literacy

John Parsons
Author and Director of The Literacy Tower

A recent episode of The Literacy Tower’s podcast, "Let’s talk about literacy", included the following discussion around the importance of reading:

John has worked in educational publishing for 25 years, and his books inspire and ignite young imaginations throughout the USA, UK, Canada, Australia, and New Zealand. He welcomes any comments, perspectives or debate on the below at johnparsons@theliteracytower.com

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Author and Director of The Literacy Tower

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The relationship between SCIS Subject Headings and SCOT

SCIS cataloguers use a combination of SCIS Subject Headings (SCISSHL)2 and Schools Online Thesaurus (ScOT)3 when adding resources to the SCIS database. ScOT is a relatively later addition to the SCIS arsenal of cataloguing tools, introduced and explained in Connections Issue 60.4 This article evaluates this two-thesoray approach with a view to distinguishing the strengths and roles of these vocabularies within education metadata.

**Subject Access**

SCISSHL standards define a number of **subject access** fields—the 600s—some or all of which are used in each SCIS record. As a rule, every SCIS record includes entries in the topical terms (650) field. The term ‘topic’ will vary from one standard to another: for example, in SCISSHL it is ‘topic’, while in Dewey Decimal it is ‘subject’, if the work referred to is an article, term ‘topic’ will vary from one standard to another: for example, in SCISSHL it is ‘topic’, while in Dewey Decimal it is ‘subject’, if the work referred to is an article, or meeting are clustered around the work, the SCISSHL are updated, making topics that are the subject of a work: personal, corporate and meeting names, respectively. Proper names are a special challenge for any kind of authority control. Indeed, it may not be feasible to control a vocabulary of names, but rather to establish rules for their construction as the need arises. This is standard practice in cataloguing and in many other standards. Name authority files are a reflection of actual names stored in a bibliographic database, rather than a predetermined list that constrains which names may be used. Name authorities improve retrieval by ensuring that all works about a given person, corporation, or meeting are clustered around the exact same name, making it easier to identify those resources within a single set of results.

**SCIS Subject Headings**

Each of these subject access fields is hand-crafted by SCIS cataloguers using the SCISSHL as a controlled vocabulary and system of rules. SCISSHL provides a controlled vocabulary for the topical fields as well as rules around how and when to construct sub-divisions, for example Nuclear energy – Economic aspects. SCIS Standards for Cataloguing and Data Entry provide detailed instructions on creating genres, geographical names, and each of the names-as-subjects fields. Each of the 660X fields use scisRef as the source of the heading or term in subfield $2.

As well as providing guidelines and authority for creating a range of subject access fields, SCISSHL is a faithful reflection of what is in the SCIS database. All 1.4 million items added to the SCIS database are candidate sources of warrant for the SCISSHL. That means that each time a new topic, geographical feature, or personal name is identified in a new work, the SCISSHL are updated, making them a thorough description of what SCIS records are about, and of what kind of records make up the SCIS database.

SCISSHL also provide see and see also references, which help users navigate subjects and negotiate synonyms and name-form variants. This provides users with useful search features such as ‘did you mean’ and ‘you might also like’ search tips.

**Schools Online Thesaurus (ScOT)**

ScOT is unfaulty.5 ScOT has provided SCIS with a controlled vocabulary for subject access—and especially for topic access—since 2006. But ScOT has also been busy elsewhere, serving cataloguing needs in other education repositories. A significant program with a strong recognisable brand is the Learning Federation (TLF). I started working on ScOT soon after TLF commenced. TLF at first sourced high-quality interactive learning objects and delivered tailored ‘learning

1. The "l" is for Lit – sometimes part of the acronym.
2. Both SCIS Subject Headings and ScOT are registered with the MARC Standards Office: http://www.loc.gov/standards/sourcelist/subject.html
3. http://www2.curriculum.edu.au/scis/connections/issue_605/issue_605_a_m_content_of_the_same_or_different.html
4. Registered with the MARC standards office: http://www.loc.gov/standards/sourcelist/descriptive-conventions.html
5. ELC-CC, latter adapted for the regional context as ANZ-LOM Metadata Application Profile: http://ndlrn.edu.au/metadata
6. TLF was supervised by National Digital Learning Resource Network.
7. www.loc.gov/standards/descriptive-conventions.html

connections. Issue no.95 Term 4 2015

connections. Issue no.95 Term 4 2015
SCIS is more

Has the second half of 2015 been as busy for you as it has for us? We spoke at the SLAV and SLANZA conferences in August and September, and attended ASLA; we’re running workshops in Melbourne, Adelaide, and Christchurch, and as usual, have thoroughly enjoyed meeting and catching up with our subscribers. August also saw a series of SCIS webinars—our third for the year.

We’re not slowing down towards the end of this year though; we’ll be hosting further workshops in Adelaide on the 20th and 21st of October, and our webinar series will be back on Thursdays between 29 October and 13 November. Visit our Professional Learning page for details.

Term 4 always welcomes the Educational Lending Right (ELR) school library survey, which SCIS manages on behalf of the Ministry for the Arts, Attorney General’s Department. 600 of you will be invited to participate. It is voluntary and is generally very straightforward, and it is all for a good cause: results of the survey are used by the Ministry to help calculate payments to Australian book creators. See our ELR webpage, or the regular Supporting Australian book creators section of Connections to find out more about the project, and how it promotes great literature in this country.

Invoicing also takes place in term 4, so if you are not under a bulk deal arrangement through your government jurisdiction or Catholic Diocese, please keep a look-out for our invoice.

Talking about subscriptions: do you subscribe to SCIS Authority Files to provide an optimal search experience for your staff and students? In late August we released the latest version of our authorities for subjects and names, and they are now available from our Authority Files page. SCIS recommends downloading the Reference Only version of both name and subject authorities, in MARC format. We have simplified the page to make these recommended download options easier to find, but all the other options are still available if you need them. Once you have downloaded the files, updating them in your library system is a one-off task. Seek assistance from your system vendor if you are unsure about how to upload the files; or get in touch with our Customer Support staff and they will assist you with any other queries.

SCIS welcomed two new staff members in August. Kate Love commenced her role as Library Services Coordinator. I hope many of you will come across her at workshops, conferences, or online. She comes to us with experience as a teacher-librarian in a range of Melbourne schools. Helen Le joined our Customer Support team and has jumped in with both feet, assisting with your technical and subscription enquires.

Laura Armstrong adventures with sculptures. Finally, it is with a heavy heart that I announce this will be the last issue of Connections with Laura Armstrong at the helm. Laura has been with SCIS since 2012 and has been editing Connections since Issue 89. During that time she oversaw a ‘spiffing up’ of the journal’s look and feel. She has also been coordinating our Professional Learning page for details. It is voluntary and is generally very straightforward, and it is all for a good cause: results of the survey are used by the Ministry to help calculate payments to Australian book creators. See our ELR webpage, or the regular Supporting Australian book creators section of Connections to find out more about the project, and how it promotes great literature in this country.

Website and app reviews

52 of the best apps for your classroom in 2015

http://list.ly/-1u3hy

Teachers introducing tablets and associated apps into their classrooms will find a range of valuable apps to explore here. Both iOS and Android apps are represented, but remember to link to the app store for your own country.

SCIS no. 1730543

2016 International Year of Pulses


The 68th United Nations General Assembly has declared that 2016 is the International Year of Pulses, recognising the vital importance of these sustainable food crops. Pulse crops include lentils, chickpeas, beans, and peas. Additional material is being added to the website periodically.

SCIS no. 1730469

Adobe Voice - show your story


Students using this fascinating app will not only narrate their own story, but add graphics, soundtracks, and text to create an animated story or project. The app is free and suitable for iPad 2 or later, with iOS7.

SCIS no. 1730549

Bully stoppers


An initiative of the Victorian Department of Education and Training, this site provides extensive resources, links, and information about current best practice to address bullying and cyber bullying. The material is relevant for primary and secondary students and their parents and teachers.

SCIS no. 1730472

EarthViewer


This award-winning, interactive app allows secondary students to delve into the deep history of the Earth. Changes in the Earth over billions of years are investigated with an emphasis on continental growth and drift; as are changes in the composition of the atmosphere, biodiversity, and temperature.

SCIS no. 1730543

Field guide apps to Australian fauna


Australian fauna from each state and territory are represented in this suite of eight apps. Students can research over 2,000 Australian mammals, birds, fish, reptiles, and invertebrates from land and water environments. Available free from the App Store and Google Play.

SCIS no. 1730485

Freya Blackwood

www.freylblackwood.com.au

The official website of award-winning illustrator Freya Blackwood comprises biographical information, specifics of purchasing prints, details of the books she has illustrated, and a link to her blog. The wonderful blog is both comprehensive and informative. A notes section is being added to the website with FAQs and information for teachers.

SCIS no. 1525666

My big tomorrow

www.mybigtomorrow.com.au

Developed by the Centre of Excellence for Equity in Higher Education at the University of Newcastle, this website offers students the opportunity to investigate a variety of careers they may be interested in, or simply choose a random career to explore. Teachers are catered for with Stage 5 lesson plans and resources, and there is also a parents section offering advice and assistance.

SCIS no. 1730550

Return to the magic of Shel Silverstein

www.shelsilverstein.com

Shel Silverstein’s books are enjoying a resurgence by accepting a new generation of young readers. His official website features games, posts, animations, and background about SCIS no. 1730552

Tynker

www.tynker.com

Schools wishing to teach students basic coding and computational thinking will enjoy this website and the links to apps available for iOS and Android. The site focuses on students actively creating technology, rather than being passive users of it. Teachers are also catered for with background information, lesson plans and tracking tools.

SCIS no. 1730532

Wonderville - science driven by curiosity

www.wonderville.ca

Aiming to ignite and educate curious students ‘with scientifically accurate and curriculum tied science resources’, this well-credentialed website features a blog, videos, animations, and online games, covering most aspects of science. The site also encourages students to explore careers in science.

SCIS no. 112584
Save time and effort with Scootle learning paths

Scootle helps you to create learning paths more efficiently. Scootle plays host to more than 20,000 digital learning resources, all of which target Australian teachers and students, and many of which are aligned to the Australian Curriculum. The good news is that you can save your favourites and organise sequences of resources into learning paths. Learning paths are organised sequences of Scootle resources. You can create your own learning paths or view others that have been shared by Scootle users.

How do I find shared learning paths?

Log in to Scootle: www.scootle.edu.au.
1. Select the ‘Learning paths’ tab in the navigation bar at the top of the screen.
2. Enter a topic in the Search field under ‘Find learning path’.
3. In the drop-down menu, select User tags or Title.
4. Click on the green ‘Add 1 item(s) to my learning paths’ button towards the very top of the page.
5. You will be prompted to create a new folder. For example, you can call the folder ‘History’.
6. Give your learning path a name, e.g. ‘Chinese history’.
7. If you wish, write a description of your learning path—you can always edit it later.
8. Click on the green ‘Add to learning path’ button.
9. Repeat steps 1, 2 and 6 with other suitable resources for your learning path.

What can I do with my learning path?

There is a lot you can do to maximise the usefulness of your learning path. If you select ‘Edit details’ from the Actions box in the top right hand corner, you can edit your description or add additional comments that will appear at the end of your path.

For each resource in the learning path, you can edit the description or add a comment by selecting the ‘Actions’ menu. Comments are particularly useful. They appear below a resource and provide a great space to enter questions or instructions for students. If you wish, you can re-order the sequence of resources by dragging and dropping them to where you would prefer them to sit.

How do I share my learning path with other Scootle users?

1. Select ‘Share’ in the Actions box.
2. In the pop-up, select the relevant year levels, learning areas, and audience.
3. Add up to three user tags—these are terms that will help people discover your learning path when they carry out a search.
4. Select ‘Share’—you can always unshare your learning path at a later date.

How do I share my learning path with students?

You’ll notice that your learning path has a PIN. If your students go to http://scootle.edu.au then select ‘Student login’ at the very top of the page, they will be prompted to enter this PIN. Once they’ve entered the PIN they will have access to your learning path.

Conclusion

Learning paths enhance the value of Scootle resources significantly and can save you a lot of time. They are useful for teacher collaborations, for curating ideas for a class project or unit of work, or for creating a list of resources that you would like to come back to at a later date.

In the next edition of Connections we’ll look at collaborative activities, as well as some of the helpful ways you can filter content in Scootle.

Supporting Australian book creators

ELR’s cornerstone

Australian school libraries are the cornerstone of the Educational Lending Rights (ELR), and in the coming weeks 600 schools will receive invitations, either by mail or email, requesting their participation in this year’s survey. School library staff play a critical part in the data collection process—without their assistance to extract the book count data from their library management systems, the ELR scheme would not be possible.

Feedback from participants

We encourage all participating schools to provide feedback about their experience via a quick online form, to enable us to improve future ELR surveys.

Australian authors and illustrators value school libraries

When a school is invited to participate in the ELR school library survey, it is a fantastic opportunity to directly support Australian book creators and publishers. Many authors and illustrators have told us how much they appreciate the support they have received from school libraries, both as students and as book creators.

A message from Toni Jordan

Back in the 1970s when dinosaurs ruled the earth, my school library was an empty room with a few books lining the walls. By high school, the library was more focused towards individual subjects and specific assignments, with resources to provide constructive help. Library facilities now seem sparkling and so inviting by comparison: comfortable chairs, quiet desks and computers, and more books than even I could read.

Some things haven’t changed. For me, school library resources were always a place of refuge and imagination. Like many kids who loved to read, I spent a lot of time in my own head. Stories were never things that happened solely within the pages of a book; I often stopped reading entirely to imagine the story going off on a different tangent from the one the author intended.

My parents generally didn’t mind me reading at home (although they made me stop every so often, certain I was doing permanent damage to my eyesight), but daydreaming was out of the question. I was vague and I was distracted, or I was plain insolent. I’m so grateful to all the librarians over the years who gave me a place to think, and to wonder.

We have published more of these statements in previous issues of Connections and on the ELR website. Read them all at www2.curriculum.edu.au/scis/elr_value_statements.html.

Image credit: Ruth Hartnup, Library, https://www.flickr.com/photos/ruthanddave/651045496/, CC BY 2.0 creativecommons.org/licenses/by/2.0/.
The Schools Catalogue Information Service (SCIS) is used by over 90% of Australian schools and offers access to the largest database of school-related catalogue records in the Southern Hemisphere.

SCIS webinars and workshops aim to help you maximise the full benefits of SCIS to improve library efficiency and learning outcomes for your school community. Join our virtual event webinars, accessible from your computer or device or come to our Adelaide workshop on 20 October or 21 October 2015.


For any questions please contact Kate Love 03 9207 9600 or scisinfo@esa.edu.au