

THE UNIVERSITY OF ADELAIDE

It starts with teachers: Building teacher capacity in Digital Technologies

Computer Science Education Research (CSER) Group
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adelaide.edu.au *seekLIGHT*

→ **ICT Capabilities:** using technology & developing technological skills

→ **Digital Technologies:** understanding how our digital world works & creating digital solutions

Graphic: Education Services Australia

CSER F-6 Digital Technologies MOOC

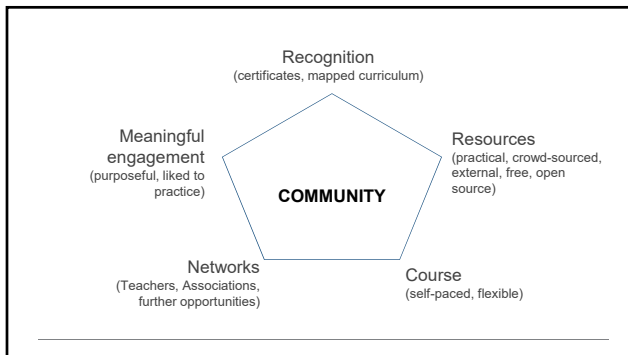
- In 2014, with support from Google, CSER launched a free online F-6 course to support Digital Technologies implementation.
- Contextualised, flexible learning for teachers.

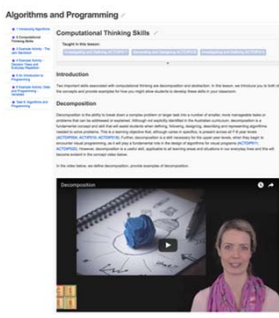
Challenges?

- Unpacking content descriptors
- Language
- Time
- Motivation
- Resources
- Where to start?

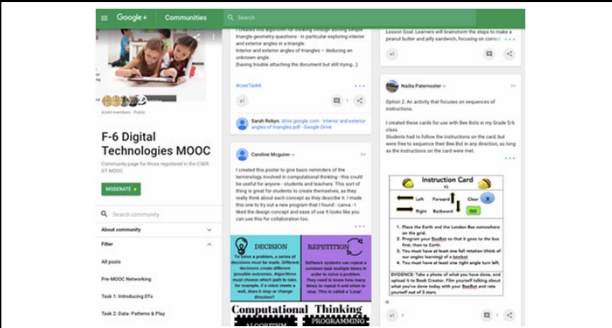
What PD do teachers need?

- Just-in-time
- Flexible
- Sustained
- Professional application
- Customisable





Unpacking curriculum
Course content (video and text)
Links to curriculum
Exemplar lessons & seed ideas
Practical activities
- linking to community








refractionmedia.com.au/careerswithcode


Digital Technologies Education Programs

We run a range of Digital Technologies Programs for Australian teachers, including our free, online CSER MOOC courses, free professional learning events, and our National Lending Library.


Available MOOCs




Lending Library




Professional Learning




Resources




CSER MOOCs



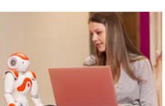
F-6 Fundamentals



7&8 Next Steps




F-6 Extended



9&10


Additional Support

- Facilitated community-based professional learning
 - Project Officers in each state and territory of Australia
 - Blended learning model supported by the CSER MOOC courses and online community
- Additional support for remote and unconnected communities
 - Localised resource delivery (eTextbook model, unplugged activities)



Lending Library

- National Lending Library
 - Free access to Digital Technologies education equipment
 - Mapped to Digital Technologies learning area and year bands
 - Exemplar activities



9,000+ enrolments
5,000+ community members
5,500+ resources

What participants are saying:

I found it invaluable making contact and connections with other people and their ideas. It really opened up some interesting lesson ideas and programs available that have been tried by others.

I've gone from reluctance about this... to being enthralled, challenged and excited about the possibilities and prospect of being part of something new and big.


It has given me many ideas that I have been able to use immediately in my teaching. Easily adopted ideas and the sharing from the whole community has provided even more ideas and resources.

the language was the most challenging part [but once] you saw what 'visual programming' or 'algorithms and programming' encompassed it took the anxiety out of the topic...

Although I have finished this course, I keep coming back to make use of all the resources this community has to offer and to make further comments.

The online access and flexible nature of the course made it possible for rural remote people to participate in sustained [high quality] PD and to interact with fellow professionals. Thanks for the opportunity to participate.

PL-in-a-Box



csermoocs.adelaide.edu.au/pdbox

CSER Project Officers

Supporting teachers across Australia with Digital Technologies



Meet the Team



- Sue Carter
- Lauren Stanhope
- Meridith Ebbs
- Steven Payne
- Ben Jucius
- Karen Butler
- Toni Falusi (ACT)
- Peter Lelong
- Celia Coffa

Digital Technologies Professional Learning



Community Based PL



- Conferences
- Expos
- Professional Association events
- Sector Professional Learning events
- CSER hosted events





School Based PL

- Briefing session
- Getting started with the MOOC
- Half Day
- Full Day

2

Supporting schools to present their own PL



PL-in-a-Box

PL-in-a-Box supports professional learning (PL) of Digital Technologies in your school or community. These resources are designed to support you or your team in delivering free professional learning resources, workshops or events for Digital Technologies.


We have a number of PL packs available, each of which provides a 2-3 hour workshop on Digital Technologies. We have prepared PL packs in a variety of formats, including theme-based packs around core Digital Technologies topics, such as Visual Programming, Algorithms and Robot Spoons, and packs associated with our free CSER MOOC courses.

For each PL pack, you will find annotations that provide more detail on how to use the PL, including: Our PL Packs are provided under Creative Commons Attribution-NonCommercial-ShareAlike license, which means that you can freely use these PL packs to provide professional learning under non-commercial arrangements.

About Us

The Computer Science Education Research (CSER) Group, based at the University of Adelaide in the School of Computer Science, aims to provide research and scholarship in the field of K-12 and tertiary Computer Science Education and more broadly the application of Computer Science methods to improve learning and teaching.

The development of PL-in-a-Box has been made possible with funding from Google.



Supporting teachers with the online environment

CSER F-6 Digital Technologies: Foundations


Digital Technologies courses learning about how we can create new technologies, as well as use them. This course will explore the foundations of digital technology and computational thinking specifically addressing the learning objectives of the Australian Digital Technologies curriculum (Foundations, to 6).

Join us to learn about how digital technology can be integrated into your classroom, exploring example lesson plans, and helping learn to effectively integrate it into lessons and support!

Please register here to attend the course!


Professional Learning Certificate available (subject to AITSL accreditation)

This project receives funding from the Australian Government Department of Education and Training. In addition, the development of this course is supported by:



Register

- Registering
- Ongoing support
- Blended learning options



Hands-on Workshops

- Algorithms
- Lending Library equipment
- Unplugged activities
- Robotics
- Visual Programming



Making Contact

<http://csermooocs.adelaide.edu.au/>

CSER Professional Learning Event Query

Name *
Your answer

Organisation *
Your answer

Email *
Your answer

Phone number
Your answer

State *

- Australian Capital Territory
- New South Wales
- Northern Territory
- Queensland
- South Australia
- Tasmania

Lending Library

Lending Library

To support Australian teachers, and with the support of the Department of Education and Training, we have established a National Lending Library program that will give you access to the latest equipment for your classrooms.

This program enables you to integrate a huge range of exciting and motivating Digital Technologies educational equipment into your classroom.

You can request to borrow, for free, a selection of Digital Technologies educational equipment, which are accompanied by lesson plans, based on our CSER MOOCs, designed for different age groups and respond to relevant content descriptors in the Australian Curriculum: Digital Technologies learning area.

We have our first kits available now ready for loan for Term 1, 2017.

- ▶ Beebot Kit
- ▶ Sphero Kit
- ▶ Ozobot Kit
- ▶ Makey Makey Kit
- ▶ Lesson Plan Exemplars

Other PL opportunities?

Scientists & Mathematicians in Schools

The Hutchins School, Year 11/12 Environmental Science students are using a CSIRO-developed sensor network to conduct research into plant water usage at the school.

Brett Smith, Environmental Science Teacher, in partnership with Andrew Terhorst.

scientistsinschools.edu.au

Teaching Computer Science Fundamentals

Learn how to teach computer science using Code.org's Computer Science Fundamentals with this free, self-paced online course.

Getting Started	1 2 3 4 5 6 7 8 9 10
Computer Science Fundamentals	1 2 3 4 5 6 7 8 9 10
Lending Ahead	1 2 3 4 5 6 7 8 9 10
Mastering the Basics: Sequencing	1 2 3 4 5 6 7 8 9 10
Mastering the Basics: Loops	1 2 3 4 5 6 7 8 9 10
Mastering the Basics: Conditional	1 2 3 4 5 6 7 8 9 10

code.org/educate/professional-development-online


Google Computational Thinking for Educators

What: A free online course helping educators integrate computational thinking into their curriculum

Who: Humanities, Math, Science, and Computing educators

When: All of the course materials are available as a self-study program.

computationalthinkingcourse.withgoogle.com




Google CS4HS

Teachers are the foundation of excellence in computer science. CS4HS is a Google initiative to provide funding for professional development of current and future computer science teachers globally.

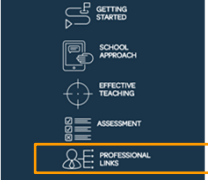
CS4HS has helped

40K+ Teachers	40+ Countries	1M+ Students
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cs4hs.com



DIGITAL TECHNOLOGIES HUB



- Upcoming events
- Online courses, blogs, podcasts, communities
- Professional Associations
- Organisations/Outreach

digitaltechnologieshub.edu.au



ACCE
AUSTRALIAN COUNCIL FOR COMPUTERS IN EDUCATION
acce.edu.au

- ACT - InTEACT
- NSW - ICTENSW
- Queensland - QSITE
- South Australia - EdTechSA
- Victoria - DLTV
- Tasmania - TASITE
- Western Australia - ECAWA
- National - ACCE
- International - ISTE



Meet the Team



- Sue Carter (Queensland)
- Lauren Stanhope (Queensland)
- Meridith Ebbs (Queensland)
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- Ben Jucius (Western Australia)
- Karen Butler (Western Australia)
- Toni Falusi (ACT)
- Peter Lelong (ACT)
- Celia Coffa (Victoria)

Q&A?



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