

Newcastle CS4S

Teacher Professional Development & Research

Presented by Mr Daniel Hickmott
newcastle.edu.au/cs4s

Presentation Overview

- Team members
- Aims
- Past CS4S Events
- Past Successes
- Past Challenges
- Plans for 2017
- Getting Involved

Team Members

- **Dr Elena Prieto-Rodriguez**
 - Lecturer, School of Education
 - Program Convenor of Secondary Teaching (Mathematics)
- **Mr Daniel Hickmott**
 - PhD student, School of Education
 - Software Engineering graduate

Aims

- To support local teachers learning and teaching *coding* and *computational thinking*
- Provide face-to-face support to teachers and contribute to a local community of practice
- To help every local student in K-12 have a positive experience of computing in school

Past CS4S Events

- **2013 & 2014:** High School workshops - 1 each year
- **2015:** 2-day Introductory and Advanced workshops
- **2016:**
 - 2-day High School and Primary School workshops
 - Small scale CS4S workshops
 - Outreach and UON events (e.g. the Digital Days Out)

Past Successes

- Overall - very positive feedback from participants
- Fostered collaboration between attending teachers
 - Teachers have developed lesson plans together
 - Past attendees have presented at 2016 workshops
- Collaboration with Google, other CS4HS partners (e.g. University of Queensland and the University of Adelaide) and UON Outreach providers (e.g. the SMART program)

Challenges

- Differentiating content for different levels of experience
- Increasing attendance to High School workshops
- Balancing the depth vs breadth of content

Plans for 2017

- 2-day Primary and High School workshops
- A longer and more in-depth Primary School professional development program
- To conduct research into the implementation of *coding* and *computational thinking* in K-12 (with a focus on K-6)
- All PD will be NESA (formerly BOSTES) accredited and count towards professional learning hours

Plans for 2017 - High School

- 2 after-school sessions over 2 days with a follow-up 2 weeks later
- Three different streams to choose from:
 - *Beginner: Creative Computing with Scratch*
 - *Intermediate: General Purpose Programming with Python*
 - *Advanced: Introduction to Bioinformatics*
- Will involve the development of a lesson / project

Plans for 2017 - Primary School

- 2-day workshop in September with similar format to 2016
 - 2016 schedule and content: cs4s.github.io/ps-2016
- 2-term PD program later in the year
 - Weekly after-school classes
 - Focused on developing Coding skills and pedagogy
 - Part of Daniel's PhD project

Getting Involved

- **Sign up for the mailing list: hckmd.com/cs4s**
- Contact Daniel or Elena via email if you have any questions
- If you are interested in demonstrating or presenting at one of our events, let us know
- Visit the website: newcastle.edu.au/cs4s