& ICT Education

Dr. Karsten Schulz
karsten.schulz@nicta.com.au
8.5.2014
About the Presenter

- Electrical Engineer, Computer Scientist
- Studied in Germany and Australia
- Completed Honours, with 10 years of industry experience
- Formerly head of SAP Research in Asia-Pacific. Lived in Singapore, worked in India, China. Reported into France, Germany, US - 25 years ICT industry experience
- Joined NICTA in 2013. Now heading up the National Digital Careers Program
- Six school-age children (Year 12-Year 1).
- 3D printing; Arduino, Mac, iPhone developer … and enthusiastic hobby surgeon :-)

digitalcareers
Problem Statement

Misconceptions about Information & Communication Technology

- Students’ lack of interest in studying ICT, and STEM in general.
- Skills gap opening, youth unemployment, missed economic opportunities
Purpose of Digital Careers

• 4 year program, funded by the Australian Government, Department of Communications, based on the successful Group X pilot in QLD.

• Increase interest amongst school students in digital technologies, engage students who have not yet developed an interest in ICT;

• Increase the portion of student enrolment in ICT courses at universities and TAFE;

• Increase awareness of career diversity, opportunities and benefits of an ICT based study program/education;

• Raise the profile and reputation of the ICT industry and ICT careers;

• **Improve the capability and confidence of school ICT teachers and catalyse the professionalisation of ICT teaching, and**

• **Provide education and training material and professional development for ICT educators (school teachers)**
Start Early
Sometimes earlier :-)

![Image of a child sitting on a desk in a cluttered room.]
Stakeholders

- Students: Years 5-10 (10-15 years old)
- Parents
- Teachers & Career Advisors
- Universities, Industry
- Government & Society as a whole
3 Pillars

• Activities & Events for Students
• Teacher Engagement Professional Development
• Promotion and diversity of ICT industry
Activities & Events

Year 10
- Career Fairs
- Website, Social Media, Classic Media
- Big Day In
- Gap 1
- Bebras
- Young ICT Explorers

Year 5
- Club Kidpreneur

Inform | Involve | Engage
Activities & Events for Students /2014

- Inform 114,000 students through events.
- Involve & engage 33,000-38,000 students through activities.
- Retain students along inform - involve - engage pathway.
Within 45 minutes, Bebras introduces 21 of the 44 strands in the new digital technologies curriculum with a particular focus on computational thinking.

www.bebras.edu.au
Activity Map

A directory of available ICT student activities in Australia
DC Organisational Model

- National, State Chapter
  - Steering Committee
  - Educators Advisory Committee
  - Management/Operations Team
Teacher Engagement & Professional Development

- We Listen to the needs of the teachers...
  - Educator Advisory Committees
- We Support teachers...
  - Teaching the teacher outreach program (QUT, UQ)
  - MOOC with University of Adelaide (Years 7-8)
  - ICT in Schools: Strategic partnership with CSIRO
  - Partnership with ACARA re. Network of Expertise, Bebras
  - University Academic mentorship program (proposed)
  - Activity Map
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