Digital Careers & Universities

Dr. Karsten Schulz
karsten.schulz@nicta.com.au
7.7.2014
Issue

Misconceptions about Information & Communication Technology resulting in:

➡ Students’ lack of interest in studying ICT, and STEM in general.
➡ Skills gap opening, youth unemployment, missed economic opportunities.
Impact on Universities

• Quantity: Reduced student numbers have led to staff losses and in many cases the merging or closure of Faculties/Schools

• Quality: Entry level scores have been reduced

• Retention: % of students who drop out of their ICT studies
How is Digital Careers different?

Start earlier

- We cater for students as young as age 8: School years 3-12

Engage the influencers

- Parents, Teachers & Career Advisors

Connect the value chain

- Primary & Secondary Schools, Universities, Industry

Connect the ecosystem

- ACARA, various associations, activity providers, education departments, ...
Pre-Competitive Approach

Digital Careers takes a pre-competitive approach which aims to:

• Increase the enrolments in ICT studies
• Increase the quality and retention of students who enrol in ICT studies
History and Origins

- Based on successful pilot in QLD, commencing in 2007 as Group X.
- Consortium of like-minded parties (Unis, Industry, Govt).
- Since then, the number of students commencing tertiary ICT studies in QLD has increased by 50%.
About Digital Careers

4 year program, funded by the Australian Government, Department of Communications, state Governments, Universities, and Industry.

Purpose:

• Generate interest in digital technologies amongst school students.

• 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.

• Provide education and training material and professional development for ICT educators.

• Improve the capability and confidence of school ICT teachers and catalyse the professionalisation of ICT teaching.
Three Pillars

• Emotional & factual connectedness: Activities & Events for Students
• Teacher Engagement & Professional Development
• Promotion and diversity of the ICT industry
Activities & Events for Students

Plan for 2014:

• Inform 114,000 students through career fairs.

• Involve & engage 33,000-38,000 students through hands-on activities

• Retain students along inform - involve - engage pathway.
National Activities & Events

Year 3
- Career Fairs
- Website, Social Media, Classic Media
- Big Day In
- Gap 1
- Club Kidpreneur

Year 12
- Career Fairs
- Website, Social Media, Classic Media
- Big Day In
- Gap 1
- Bebras
- Young ICT Explorers

Inform | Involve | Engage
Teacher Engagement & Professional Development

We listen to the needs of the teachers...

• Educator Advisory Committees

We support teachers ...

• Programs for low SES and rural schools
• MOOC with University of Adelaide (Years 7-8)
• ICT in Schools: Strategic partnership with CSIRO
• Partnership with ACARA re. Network of Expertise
• Activity Map
Promotion of ICT Industry

• Career Fairs
• Online and Social Media
• Conferences
• Collateral
• Profiling of Industries and the role ICT plays in them
How we connect with Universities

Universities help shape and progress the program by:

• Providing strategic input: Steering/Advisory Committees
• Chairing some of our state committees
• Providing cash and in-kind resources
• Engaging in events & activities
• Participating in joint projects
University Engagement Examples

• Connecting early with prospective students

• UQ, UNSW, ANU, JCU, UTS, CSU, UOW, RMIT, UniSA, UoN host Young ICT Explorers or BDI events

• Uni Volunteers attend Digital Careers booths at career fairs

• NSW, ACT steering committees have University chairs

• DC enriches a Uni’s outreach activities. Great examples: ANU, QUT

• DC sponsors MOOC development with University of Adelaide

• Research opportunities: Student attitudes towards ICT (QUT), International ICT student assessment (Bebras) with Swinburne
What’s next ...

• Speak with our University partners about their experiences with us.

• Become a member of Digital Careers

• Engage in a national program, that adjusts to the needs of your state and University

• See your ICT student numbers grow
Further Information

www.digitalcareers.edu.au (under development)
www.youngictexplorers.net.au
www.bebras.edu.au
Digital Careers & Universities

Dr. Karsten Schulz
karsten.schulz@nicta.com.au
7.7.2014

Funded by the Australian Government Department of Communications
Backup
Activity Map

A directory of available ICT student activities in Australia
### Activity & Event Strategy

<table>
<thead>
<tr>
<th></th>
<th>Inform</th>
<th>Involve</th>
<th>Engage</th>
</tr>
</thead>
<tbody>
<tr>
<td>level of immersion</td>
<td>low</td>
<td>medium</td>
<td>high</td>
</tr>
<tr>
<td>level of difficulty</td>
<td>low</td>
<td>low</td>
<td>medium</td>
</tr>
<tr>
<td>time commitment by student</td>
<td>minutes</td>
<td>hour/s</td>
<td>hours ...months</td>
</tr>
<tr>
<td>feel good factor</td>
<td>high</td>
<td>high</td>
<td>high</td>
</tr>
</tbody>
</table>