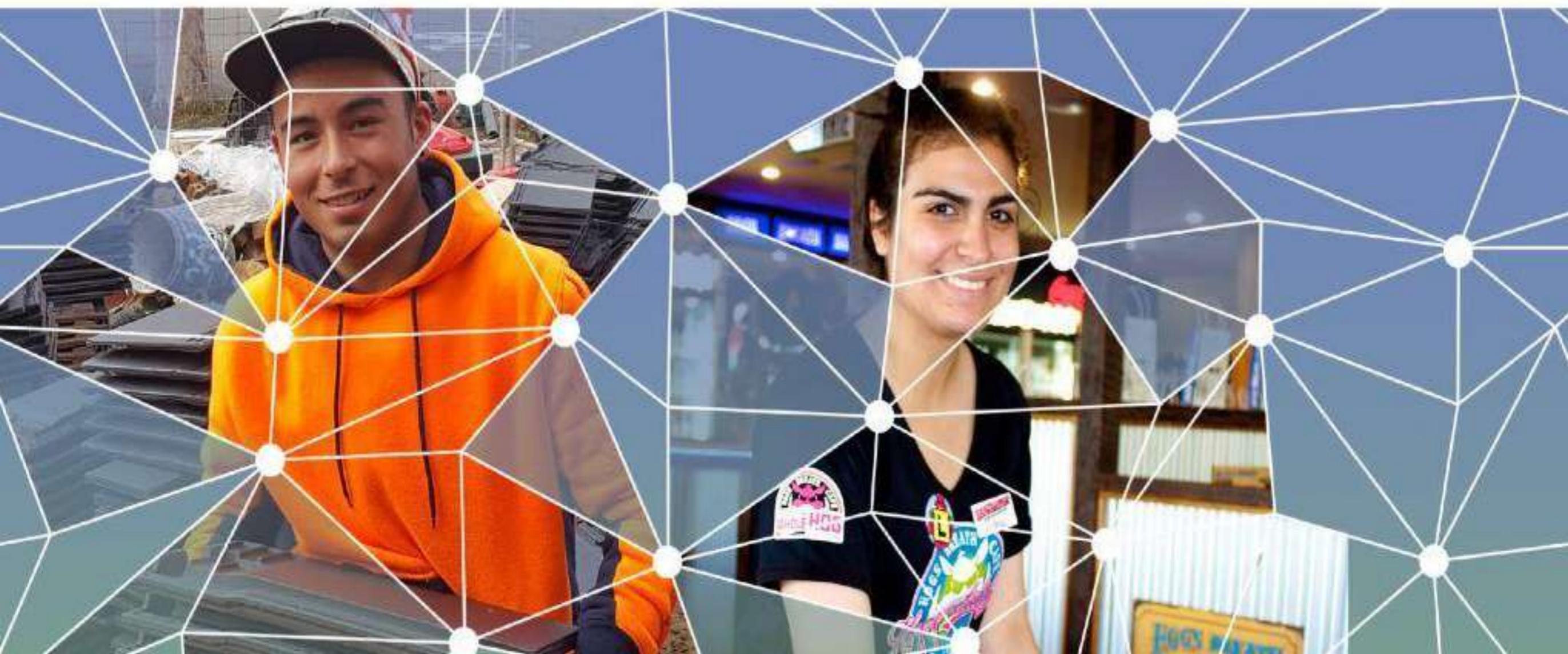


# 2017 NWCTS FORUM



# DEVELOPING A DIGITAL LITERACY STRATEGY



# INTRODUCTION

Why a digital literacy strategy?

Further education and training, open employment and community participation

Core Skills for Work Framework

Victorian Curriculum

Employability – finding opportunities and participating in the workforce



# 21ST CENTURY LEARNING SKILLS

Developing Digital Literacy & Collaboration for Students  
with Diverse Needs

# INTRODUCING MYSELF



- ▶ Digital Technologies teacher @ Waratah SDS
- ▶ Over the past 10 years I've taught in primary and high school settings in Australia, South Korea and the United Kingdom.
- ▶ Instructor/Researcher @ the University of Melbourne
- ▶ Committee of Management @ DLTV
- ▶ Completing research investigating the use of cooperative videogames as a space for developing social skills in students with socio-emotional challenges.

# THE BIG QUESTIONS FOR TODAY'S SESSION

Q: How can we ensure positive post-school outcomes for our students?



Q: What skills do our students need to participate in society in the 21st century?



Q: How does the curriculum guide us in developing these skills?



Q: What does the curriculum look like in action in a real setting?



Q: Can we play with all of the fun stuff?

# TODAY'S PLAN

<b>Time Allocation</b>	<b>Activity</b>
15 mins	Exploring the research & thinking about our students
15 mins	Examining the Victorian Curriculum
10 mins	Case studies from Waratah SDS
20 mins	Hands On Activities & Discussion: Robotics, game making, game-based collaborative problem solving, collaborative creation in Minecraft & social media training
10 mins	Revisiting the research & questions

# EMPLOYMENT OPPORTUNITIES FOR YOUNG AUSTRALIANS

*Entry level jobs – opportunities and barriers*

Department of Employment June 2015

**Breaking down the numbers for jobs advertised as ‘entry level’:**

**88%** of surveyed vacancies were filled

**43** applicants for each position

**7** suitable applicants per vacancy

# EMPLOYMENT OPPORTUNITIES FOR YOUNG AUSTRALIANS

*Entry level jobs – opportunities and barriers*

Department of Employment June 2015

## **Key Findings:**

**88%** of surveyed vacancies were filled  
**43** applicants for each position  
**7** suitable applicants per vacancy

- There are generally large numbers of applicants for these positions.
- Lack of experience is a significant barrier. Only about 30% of jobs in these occupations are open to applicants without experience and, reflecting the strong competition for vacancies, some of these are filled by experienced workers.
- The vast majority of applicants are considered by employers to be unsuitable.
- Many employers (44%) had a positive view of young job seekers without experience, indicating they would employ them, but in practice they sought experienced applicants for their vacancies.

# A USEFUL METAPHOR FOR DESCRIBING THE CHALLENGES FACED BY SOME OF MY STUDENTS

(Remember these guys)



Sustainable LLL  
Participation  
Employment  
Acceptance

Challenges presented by both the real barriers and the perceived barriers arising from their disability



# Q: WHAT SKILLS DO OUR STUDENTS NEED TO PARTICIPATE IN SOCIETY IN THE 21ST CENTURY?

- There has been a value shift in the globalised world from **manufacturing**-based economies to **knowledge**-based economies (OECD 2015; 2016).
- “Work environments are **technology-rich**, problems are frequently **ill-defined** and people work in **teams**, often multidisciplinary teams, to deal with them” (Griffin, McGaw & Care, 2012, p. 1).
- What does this mean for **our students** with cognitive and socio-emotional challenges?

Q: WHAT SKILLS DO OUR STUDENTS NEED TO PARTICIPATE  
IN SOCIETY IN THE 21ST CENTURY?

Finding out what knowledge and skills our students  
need to know to succeed:

The Assessment & Teaching of 21st Century Skills project

- This project was jointly conducted by 6 countries (Australia, Finland, Singapore, the United States, Costa Rica and the Netherlands).
- It was a public/private funding arrangement with significant investment from Cisco, Intel and Microsoft.

# Q: WHAT SKILLS DO OUR STUDENTS NEED TO PARTICIPATE IN SOCIETY IN THE 21ST CENTURY?

## The **ATC21S** 10 Essential Skills for Students in the 21st Century

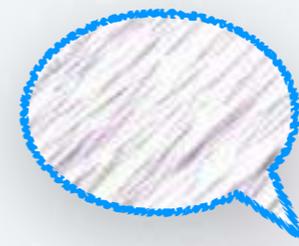
<b>Ways of Thinking</b>	<b>Ways of Working</b>	<b>Tools for Working</b>	<b>Living in the World</b>
<ol style="list-style-type: none"><li>1. Creativity and innovation</li><li>2. Critical thinking, problem solving, decision making</li><li>3. Learning to learn, metacognition</li></ol>	<ol style="list-style-type: none"><li>4. Communication</li><li>5. Collaboration (teamwork)</li></ol>	<ol style="list-style-type: none"><li>6. Information literacy</li><li>7. ICT literacy</li></ol>	<ol style="list-style-type: none"><li>8. Citizenship – local and global</li><li>9. Life and career</li><li>10. Personal and social responsibility, including cultural awareness and competence</li></ol>

# SOLUTIONS TO ADDRESS CHALLENGES FACED BY MY STUDENTS

Sustainable LLL  
Participation  
Employment  
Acceptance



The **ATC21S** 10 Essential Skills for Students in the 21st Century



Q: How does the curriculum guide us in developing these skills?



- ◇ **Digital Technologies**
- ◇ **Design and Technologies**
- ◇ **Personal and Social Capability**

“The curriculum defines the common and core set of knowledge and skills that are required both for life-long learning and active and informed citizenship” (VCAA, 2015).



Q: How does the curriculum guide us in developing these skills?



## ⬠ Digital Technologies

*Kagan Line - Do you agree with this statement?*

“I feel very comfortable teaching the Digital Technologies learning area in my school/professional context.”

Disagree



Agree



Q: How does the curriculum guide us in developing these skills?



## Design and Technologies

*Kagan Line - Do you agree with this statement?*

“I feel very comfortable teaching the Design & Technologies learning area in my school/professional context.”

Disagree



Agree



Q: How does the curriculum guide us in developing these skills?



## ◊ Personal and Social Capability

*Kagan Line - Do you agree with this statement?*

“I feel very comfortable teaching the Personal & Social capability in my school/professional context.”

Disagree



Agree

Q: How does the curriculum guide us in developing these skills?

- ★ General capability (skills) that should be incorporated across all discipline-based learning areas.

## Self-Awareness and Management

- ✓ Recognition and expression of emotions
- ✓ Development of resilience

## Social Awareness and Management

- ✓ Relationships and diversity
- ✓ Collaboration

Q: How does the curriculum guide us in developing these skills?

- ★ Discipline-based learning area that focus on key content knowledge and skills.

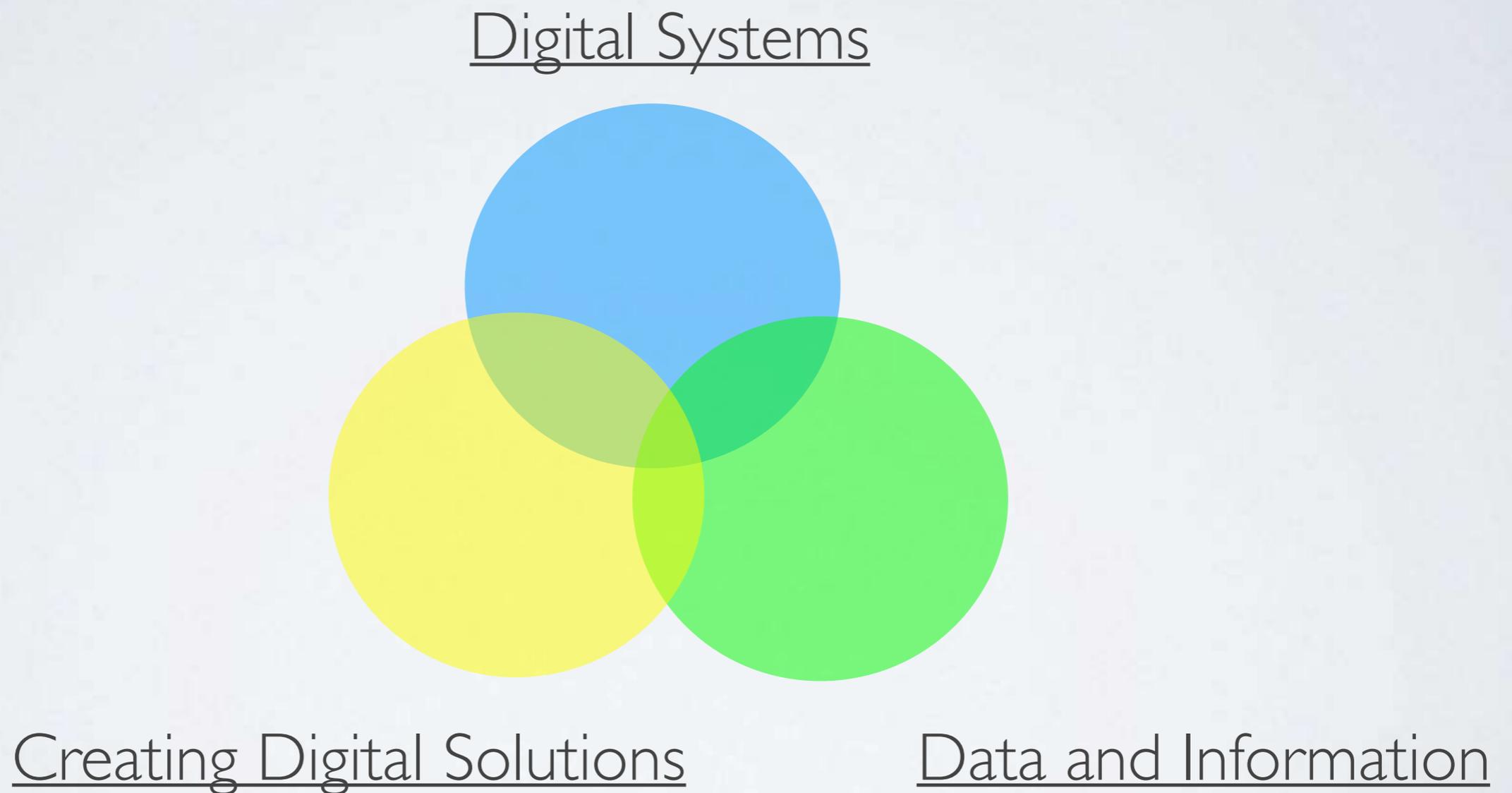
Digital Systems

Data and Information

Creating Digital Solutions

Q: How does the curriculum guide us in developing these skills?

- ★ Discipline-based learning area that focus on key content knowledge and skills.



Q: How does the curriculum guide us in developing these skills?

- ★ Discipline-based learning area that focus on key content knowledge and skills.

Technologies and Society

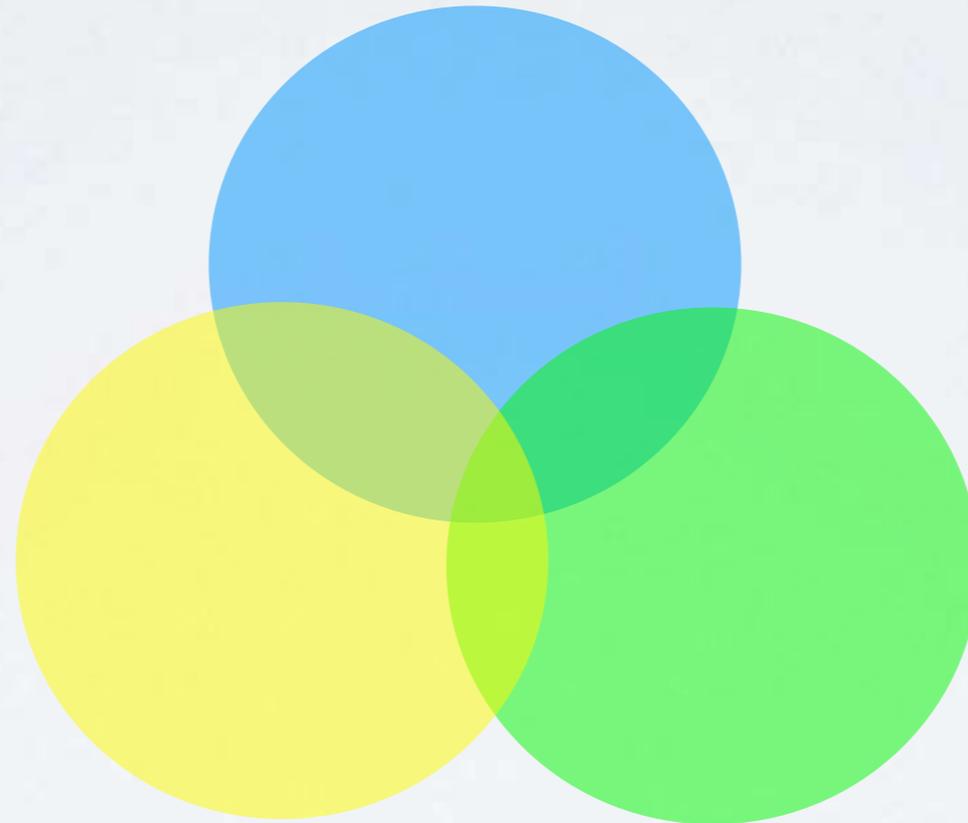
Creating Designed Solutions

Technologies Contexts

Q: How does the curriculum guide us in developing these skills?

- ★ Discipline-based learning area that focus on key content knowledge and skills.

Technologies and Society



Technologies Contexts

Creating Designed Solutions

# Q: How does the curriculum guide us in developing these skills?

◇ Digital Technologies



◇ Design and Technologies



◇ Personal and Social Capability



Where do these 3 areas of the VC address the **10 essential skills**?

Ways of Thinking	Ways of Working	Tools for Working	Living in the World
1. Creativity and innovation 2. Critical thinking, problem solving, decision making 3. Learning to learn, metacognition	4. Communication 5. Collaboration (teamwork)	6. Information literacy 7. ICT literacy	8. Citizenship – local and global 9. Life and career 10. Personal and social responsibility, including cultural awareness and competence



# Q: How does the curriculum guide us in developing these skills?

Where do these 3 areas of the VC address the **10 essential skills**?

<b>Ways of Thinking</b>	<b>Ways of Working</b>	<b>Tools for Working</b>	<b>Living in the World</b>
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Activity: Can you find these 10 skills in the **Digital Technologies**, **Design and Technologies** and **Personal and Social Capability** curriculums?

Q: What does the curriculum look like in action in a real setting?

# Case studies from Waratah SDS



Robotics

DGB Collab. Problem Solving



Game Design



Collaborative Creation in Minecraft



# CASE #1: RO★BOTICS CLUB

- Students worked in **INCLUSIVE TEAMS** with some students from Waratah and some students from Brunswick SDS.
- Provided with a **MISSION CARD** with a challenge for the session/a number of sessions.
- Teacher acted as a **FACILITATOR**, ensuring that everyone had a defined role within the team but trying to encourage independence.
- For some students, this was designed as a **LEADERSHIP** class where they had to ensure that everyone could contribute to the group goal.
- For other students, this was a **SOCIAL SKILLS** program where they had a space to develop and practise skills such as negation and perspective taking.



## What you need:

LEGO Mindstorms, Edison,  
Ozobot, Sphero

# CASE #2: COLLABORATIVE PROBLEM SOLVING

- Students play **COOPERATIVE** games in a single, united team.
- These carefully selected games set up **PROBLEMS** that require the contribution of every player in order to progress.
- Well designed games encourage (force?) students to **COMMUNICATE** and **PARTICIPATE** in ways in which they would not normally be comfortable with in other contexts.



## What you need:

Wii U, well designed co-op games

# CASE #3: GAME DESIGN

- Some students worked in **INCLUSIVE TEAMS** with some students from Waratah and some students from Brunswick SDS.
- Other students worked on their own game, but still required **SUPPORT** from their peers to solve problems and address bugs in their game design and coding.
- Teachers acted as **FACILITATORS**, but not necessarily experts. **VOLUNTEERS** and **PEER TUTORING** played a huge role in supporting learning.
- For some students, this was designed as a **LEADERSHIP** class where they had to ensure that everyone could contribute to the group goal of a final app which contained all of our finished games.
- Dedicated roles (like a commercial design team) were assigned in a large group game to ensure that everyone could **CONTRIBUTE**.



## What you need:

Computers, game making software (Clickteam Fusion, Scratch, Game Maker Studio), **volunteers**

# CASE #4: COLLABORATIVE CREATION IN MINECRAFT

- Minecraft is virtual Lego set where students can **CREATE LIVING WORLDS**.
- It has an incredible attention to **DETAIL** and allows students to build things like circuits, ecosystems and simulate natural events like volcanoes.
- Students can work independently on an iPad/PC and physically share their creations with their peers, or they can work collaboratively in a **SHARED WORLD**.



## What you need:

iPad 2s (or newer) and Minecraft Pocket Edition **or** computers and Minecraft Education Edition.

# CASE #5: SOCIAL MEDIA TRAINING

- Edmodo is a gated-version of Facebook designed for use in educational settings.
- It looks remarkably similar to Facebook, but the teacher must **ALLOW** people to join the social spaces (groups, etc) and can **MONITOR** the conversation.
- We position this as a safe space for both **SOCIAL ENGAGEMENT** and **REFLECTION** upon learning.
- This space is also used a training space for 'cyber-safety' and used to foster a **DIALOGUE** around the safe, responsible and respectful use of social media.



## What you need:

iPad 2s (or newer) and Minecraft Pocket Edition **or** computers and Minecraft Education Edition.

Q: Can we play with all of the fun stuff?

**Yes!**

If you need help or want to share something interesting/exciting/cool please contact me!



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[@hattdesigns](https://twitter.com/hattdesigns)

# CTS CAREER CONNECTIONS



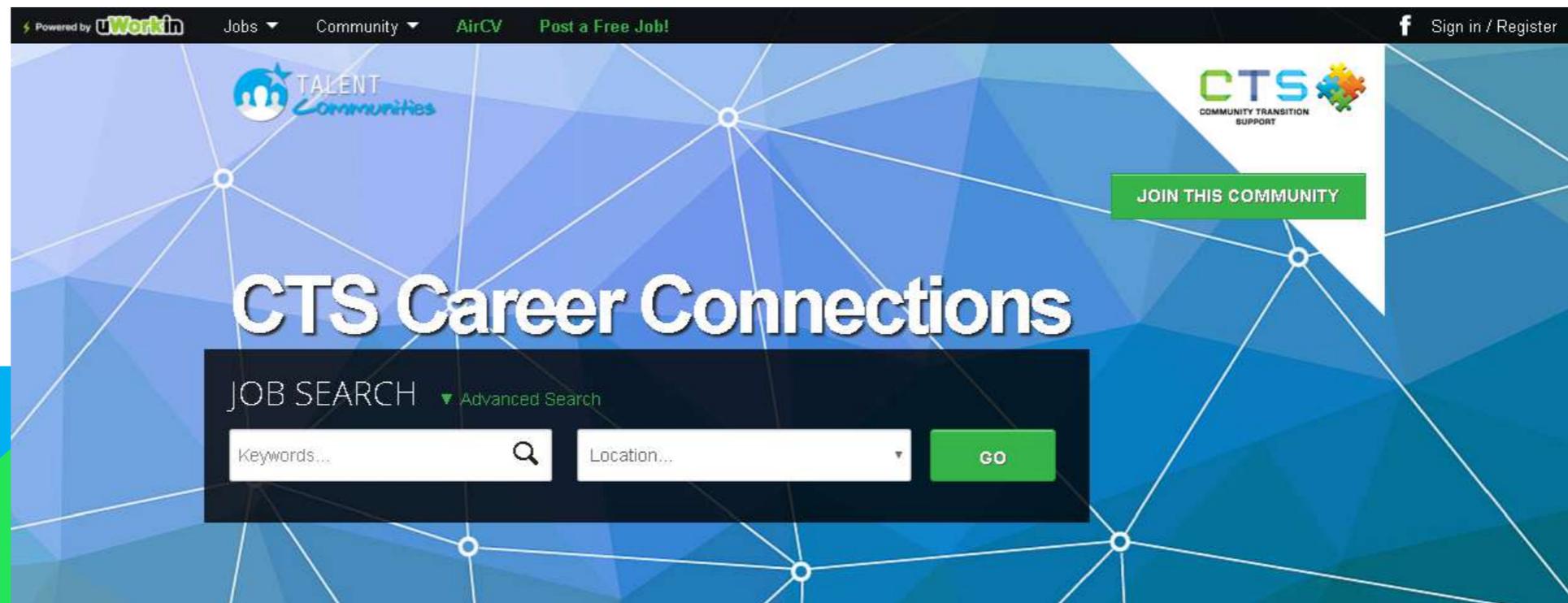
A screenshot of the CTS Career Connections website. The page has a blue and white geometric background with a network of white lines and nodes. At the top, there is a navigation bar with links for 'Jobs', 'Community', 'AirCV', and 'Post a Free Job!'. On the right side of the navigation bar, there is a Facebook icon and the text 'Sign in / Register'. The main content area features the 'TALENT Communities' logo on the left and the 'CTS COMMUNITY TRANSITION SUPPORT' logo on the right. A prominent green button with the text 'JOIN THIS COMMUNITY' is positioned to the right of the CTS logo. The central focus is the title 'CTS Career Connections' in large, white, bold letters. Below the title is a dark grey search box containing the text 'JOB SEARCH' and a link to 'Advanced Search'. The search box includes two input fields: 'Keywords...' with a magnifying glass icon and 'Location...' with a dropdown arrow. A green 'GO' button is located to the right of the search fields.

<http://www.ctscareerconnections.com.au/>

# WHAT IS CTS CAREER CONNECTIONS?



Career Connections online talent community supports the 22 specialist schools in Melbourne's North West to enhance the students' career development knowledge and skills.



# THE CROXTON EXPERIENCE - 2016



Trialling the portal with year 10 students – what did we learn?

School organisation

Student learning

- ICT
- Career Development

Students engagement



# THE CROXTON EXPERIENCE – 2017



What the school did differently

- Focus on career development
- Include the ICT team
- Do not assume student skills
- Practice the basics – remembering passwords, opening emails, logging in
- Partner with another organisation

