Skills needed for the future of work

A discussion of the literature, data, and future research using LSAY

Peta Skujins
Educational institutions
What role should they play?

• Can skills be taught?
  – Technical vs. soft-skills

• Higher education has started embedding skills into their curriculum

• Is VET better placed to meet employer needs?
What skills are needed for the future of work?

• Soft-skills
  – ‘Personal attributes that enable someone to interact effectively and harmoniously with other people.’

• Future work skills
  – Skills that enable someone to interact effectively with information and technology
What skills are needed for the future of work?

• Soft-skills
  – Teamwork
  – Communication
  – Outgoing
  – Emotionally stable

• Future work skills
  – Digital skills
  – Information overload
Skills Frameworks

- Australian Core Skills Framework
- Core Skills for Work Developmental Framework
- Employability Skills Framework
- Future Work Skills 2020
- Framework for 21st Century Learning
Types of skills

- Basic cognitive
  - literacy & numeracy
- Higher-order cognitive
  - soft-skills
- Socio-emotional
  - personality
- Technical
  - specific work skills

(Cunningham & Villasenor, 2016)
Types of skills

- Basic cognitive
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- Socio-emotional
  - personality

- Technical
  - specific work skills

(Cunningham & Villasenor, 2016)
Current Australian data
Basic cognitive & technical skills

- PISA 2012
  - ↓ reading achievement
  - ↓ maths achievement
  - → science achievement
- NAP-ICTL
  - ↓ computer literacy
- NAP-CC
  - ↓ civics and citizenship
Current Australian data
Higher-order cognitive & socio-emotional skills

- PISA 2012
  - Locus of control – 6-item measure
  - Perseverance – 4-item measure
  - Creative problem solving - module

- LSAY Y06 / Y09
  - Problem solving – improved through study
  - Analytic skills – improved through study
  - Teamwork – improved through study
Data gaps – What else do we need to know?

- Basic cognitive
- Higher-order cognitive
- Socio-emotional
- Technical
Measuring skills in LSAY

1. Consultation process
2. Review
3. Prepare items for DET
4. Review
5. New items
6. Cognitive interviewing
7. Pilot
8. Questionnaire
Measuring skills in LSAY

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Measuring skills in LSAY - Issues

- Phone + Online
- Self-report
- Young people
- 20 minutes
Measuring skills in LSAY - Issues

Self-report

- Accurate representation of skills?
- Understanding of the skill?
- Use/development of the skill?
- Tracking change over time?
Framework for 21st Century Learning: Learning and Innovation Skills

- Creativity and innovation
- Critical thinking and problem solving
- Communication and collaboration
LSAY questions – Post-school education

The following set of questions refers to the study or training you’ve recently completed.

On a scale from zero to ten where zero means strongly disagree and ten means strongly agree, how much do you agree or disagree with each of these statements?

The study or training developed...

a) My problem solving skills
b) My creativity
c) My ability to work as a team member
d) My oral communication skills
e) My critical thinking
f) My digital skills?
The next set of questions is about how you think and behave. For these questions, please answer using a zero to ten scale, where zero means this is nothing like you and ten means this is exactly like you.

a) I can generally see a way out of problem situations

b) When I make decisions I am happy with them later

c) I see problems as challenges to overcome
Personal attributes

- Personality – Big 5
- Self-esteem
- Grit or self-control
- Psychological distress (K6)

+ PISA 2015 ‘non-cognitive’ outcomes
Opportunities for research using LSAY data

• Post-school education ↔ skills development
  What types of post-school education result in the greatest skills development?

• Skills development ↔ skills level
  How do participants with higher skills levels rate their skills development?

• Skills level ↔ employment outcomes
  Do participants with higher skills levels have better employment outcomes?
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