Differentiating the relevance of CBT to occupations in the aviation industry: Lessons for VET?

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Competency-Based Education in Aviation
Exploring Alternate Training Pathways

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Aviation Professional

Engineer

Pilot

Cabin Crew

Air Traffic Control
International Civil Aviation Organisation (ICAO)

- Increasing move towards competencies
- One size fits all approach
- Employed a DACUM style methodology
  - “Developing a Curriculum”
Our concerns

- A fundamental (evangelistic) acceptance in aviation of CBE across all professions.
- No common framework.
- No research into its effectiveness e.g. commercial pilot training in Australia.
- Professional concerned about move to CBE.
Our research

• Interviewed aviation professionals:
  – Airline pilots
  – Aircraft Engineers
  – Air traffic controllers (ATC)
  – Cabin crew

• Geography
  – Asia pacific
  – North America
  – Middles East
  – Europe
Findings
BIRD STRIKE
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PASSENGER EVACUATION
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<th>Odd Passenger</th>
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Happy Passenger

No other exit

Complete log
Inspect as per manual

No

Yes

Inspect as per manual
FUEL LEAK
CBE

COMPETENCIES

COMPETENCE
CBE

COMPETENCIES

COMPETENCE

SIMPLE
Nature of competence is simple or is accomplished in a linear pre-described process.

Competencies in textual form can represent competence.

Competency based education fits neatly into the framework.
CBE

COMPETENCIES

COMPETENCE

SIMPLE

COMPLEX
• Competency based education does not fit into the framework.

• Competencies in textual form do not, or cannot represent competence.
• Those that do are simplistic in nature, vague or impractical.

• Nature of competence complex.
• Often requiring multiple team members.
• Problem sometimes not previously considered.
• Numerous options available.
• Time pressure or higher risk.
ISSUES!

Impractical for competencies (textual representations) to represent practice
Impossible for competencies (textual representations) to represent practice.
Implication for VET

• In Australian VET, CBT is a ‘one-size-fits-all’ model
• It has been estimated that VET/CBT covers 80% of occupations in Australia (OECD, 2008)
• Competency standards may suit some occupations better than others
• VET/CBT covers roles and tasks from entry level to advanced/expert levels (Cert I to Advanced Dip)
• Competency standards may suit some levels better than others