Challenges and Strategies for achieving better integration of NTS into regulated flight training

Tony Power – PhD Candidate & Aviation Consultant

Basic Flight Training

- Training and licencing framework created in the late 1940s

- Light single-engine piston aircraft as the primary training platform

- Heavy focus on single pilot operations

- Heavy focus on technical skills

- Heavy focus on obtaining flight hours to build competence and experience

Is there desire for more NTS in flight training?

Yes

Airline operators reported their new hires had great technical skills but needed more development in NTS.

"we have to retrain you in things like situational awareness, decision making and all those sorts of skills that we need to because we've got to accelerate these people very quickly into an FO slot"
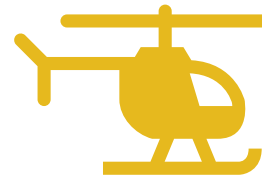
Flying school operators and instructors reported a desire to use more scenario based training to help pilots develop NTS.

NTS

- Communication
- Decision-making
- Teamwork
- Multi-crew operations

Why not simply add more NTS training to CPL training programs?

More training means more cost

- Students are price sensitive
  - Tend to focus on the "sticker price" of the CPL
  - Flight training is expensive
  - *"It would be extra flying, and that's a cost impediment to a student, and that's what it comes down to at this end."*
- Airline customers are price sensitive
  - Need to be convinced of a positive return on investment

Why not substitute less relevant training with NTS rather than add to be cost neutral?

The regulation of flight training

The need to ensure the training is **safe**.

The need to ensure the training is **effective**.

Obtaining a CPL requires

- Achieving specified knowledge competencies
- Achieving specified skill competencies
- Accumulating a minimum number of flight hours

Experience – Integrated CPL Course	Time
Pilot in Command	50 hours
Pilot in Command cross-country	20 hours
Dual Instrument Flight	5 hours
Dual Instrument (Simulation device or flight)	5 hours
Other Flying	75 hours (5 may be simulated)
Total	**150 hours**

The Regulation of Flight Training

- CASA approval is required for:
    - The training operator
    - Key staff
    - The training curriculum
    - The aircraft and other training platforms used
    - Operations and Training Manuals
- If the training forms part of a Diploma or Degree program, regulatory approval is also required from ASQA or TEQSA

Options

Flexible use of mandated flight hours	• To allow for more scenario based training in NTS
Multi-Crew Operations	• Introduce multi-crew operations much earlier in training
Accommodate multiple training pathways	• General Aviation vs Airline Cadets
Flexible Training Plans	• Use of training resources based on student progression
Matching technology to training tasks	• Reduce the risk of negative training
Training Platform neutral	• Outcomes focused

Why not obtain regulatory change?

CASA must be satisfied the reformed training will be **safe** and **effective**

Can the industry provide sufficient evidence?

Challenges

Flying schools lack the resources for evidence gathering

Small operators on tight margins

The regulatory approval process

Does CASA know what it requires to approval change?

Are CASA's requirement clearly communicated to industry?

Is CASA open to change?

Varying views within the industry

Does CASA have the capacity for change?

Resourcing and expertise

What can be done?

Strategies

Greater cooperation between training providers to pool resources

Joint research projects to build evidence of training safety and effectiveness to satisfy regulators

Foster research partnerships with universities, with a clear focus on practical studies

Advocate for more regulatory resourcing for CASA

Research

Expertise

Approval processes

A model for integrating new technology

- The process used in the past can be a starting point for the regulatory risk assessments around new technology

- Setting a safe zone boundary for the technology – to give the opportunity to build

  - Expertise in using the technology

  - An evidence base for regulators

  - Further develop towards technological maturity

A model for integrating new technology

▶ Provides a pathway for the expansion of the legally recognised role of the technology over time

  ▶ Can remove/reduce the boundaries as confidence builds and finer risks assessments can be made

Have we done this before?

- What about the Multi-Crew Pilot Licence (MPL)?
  - Unpopular Limitations with students
    - Multi-Crew operations with an operator with a check and training program only
  - Expense
    - Full Flight Simulators in addition to training aircraft
  - Reluctance of operators to commit to employ trainee pilots
  - Unfamiliarity

contact@tkpconsulting.com.au