Language Proficiency Testing in Aviation
– 10 years of challenges and solutions

Neil Bullock,
International Civil Aviation English Association
Manual on the Implementation of ICAO Language Proficiency Requirements

Approved by the Secretary General and published under his authority

Second Edition — 2010

International Civil Aviation Organization
Communication

‘a code that is used in a very restricted context and register associated with distinctive probabilities of discourse functions’

Alderson 2009
Intro to LPRs

- Testing – initial & recurrent
- Pilots and ATCOs
- Speaking & listening only
- 5 Holistic Descriptors
- 6 skills
- 6 levels
- Level 4 minimum
- HIGH STAKES TESTING

ICAO Doc9835
A specific purpose language test ... Allows us to make inference about a test taker’s capacity to use language in the specific purpose domain (Douglas, 2000)
Key challenges

1 – standardisation
2 – it’s a language test!
3 – ambiguity
4 – face validity
5 – testing skills
6 – test driven system
7 – fairness

A group of pilots in Korea seriously doubted whether the proficiency test they were obliged to take corresponded to the real tasks and demands of their job. Kim (2013).

English proficiency is only one of the many factors that influence performance in a professional setting (Kim, 2018). Miscommunication between pilots and air traffic personnel could not be attributed solely to limited English proficiency on the part of non-native speakers of English (Kim & Elder 2009).
Solution in Testing 1: TD in CH

The challenges - LP exams for pilots

• Disconnect – TSP / TTs = zero face validity.
• Poorly produced non-contextual material.
• Little test security.
• No sample material.
• Lack of testing expertise.
• Limited training.
Solution in Testing 1: TD in CH

The solutions: 2010 >
- Test development team
- Weir / Fulcher / Alderson
- TD plan & Spec
- SMEs – real world + Disc. Analysis
- Training, research and studies.
- Statistics > Analysis > Validity & Reliability
- RTF > Trialling > Samples
- Feedback > Engaged with stakeholders
- 3-year review
Voice only interaction (role play) = 0.84

Face-to-Face Interview = 0.90

Listening Test = 0.91

Exam Organisation = 0.96

After the Exam = 0.94

Overall = 0.91
## Standard Setting towards validity 2017-2018

<table>
<thead>
<tr>
<th>Construct</th>
<th>Context</th>
<th>Cognitive</th>
<th>Content</th>
<th>Face</th>
<th>Consequential</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scores out of 5 (5 = fully agree / 1= Fully disagree)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. I found the sample test material easy to download</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>2. I found the sample test material useful</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
</tbody>
</table>

### Speaking Ability Exam - VOI Simulated Flight

| |         | ✔️ | ✔️ | ✔️ | ✔️ | ✔️ | ✔️ |
| 3. The role-play reflects real operational situations | ✔️ | ✔️ | ✔️ | ✔️ | ✔️ | ✔️ |
| 4. The material content for the role-play is appropriate for the test | ✔️ | ✔️ | ✔️ | ✔️ | ✔️ | ✔️ |
| 5. The tasks focus on non-routine & unexpected operational events for pilots. | ✔️ | ✔️ | ✔️ | ✔️ | ✔️ | ✔️ |
| 6. Preparation time for the role-play is appropriate | ✔️ | ✔️ | ✔️ | ✔️ | ✔️ |
| 7. The duration of the role-play is appropriate | ✔️ | ✔️ | ✔️ | ✔️ | ✔️ |

**78 TTs (59%) 31 questions**
Solutions 2 – ICAEA

CONFERENCE 2018
Building on the ICAO LPRs - Communication as a Human Factor
New Perspectives on Aviation English Training and Testing
9-11 May 2018

Embry-Riddle Aeronautical University
Daytona Beach, Florida
Solutions 2 – ICAEA Projects

- Test Design Guidelines project

- Help & guidance:
  - LPR test design
  - Select and audit tests
  - Design & improve tests
  - Confidence and face validity
  - Standardisation
ICAEA Workshops

Roll-out phase:
1. 2019 and 2020 (2.5 days / 50 max):

Regional participation
- Europe (Luxembourg)
- Asia (Thailand)
- Americas (Argentina)
- Middle East (TBC)
- Africa (TBC)

2. TDGs (published online): 2019
3. ICAEA support – ongoing 2019/20
The Future of the LPRs & testing...

- Assessment literacy
- Domain communication
- Interactive competences
- Socio-cultural competences
- L1 awareness
- Research, papers & books chapters
- Using skills and expertise
- Engaging with all stakeholders
- Building relationships EASA/ICAO/TF
Thank you & bon voyage

- neilbullock@icaea.aero
References