

SCHOLARLY COMMONS

National Training Aircraft Symposium (NTAS)

2018 - The Changing Role of the Pilot

Aug 14th, 9:00 AM - 10:15 AM

Enhanced Learnability of Flight Techniques Through the Introduction of Targeted Observation Flights with Ab-Initio through Advanced Flight Training Candidates

Gary A. Carter M.Div.

Assistant Professor of Aeronautical Science, Embry-Riddle Aeronautical University, carte85F@erau.edu

Nicola M. O'Toole M.S.

Assistant Professor of Aeronautical Science, Embry-Riddle Aeronautical University, paynen@erau.edu

John M. Robbins Ph.D.

Associate Professor of Aeronautical Science & UAS Program Coordinator, Embry-Riddle Aeronautical University, robbinsj@erau.edu

Follow this and additional works at: https://commons.erau.edu/ntas



Part of the Aviation Commons

Carter, Gary A. M.Div.; O'Toole, Nicola M. M.S.; and Robbins, John M. Ph.D., "Enhanced Learnability of Flight Techniques Through the Introduction of Targeted Observation Flights with Ab-Initio through Advanced Flight Training Candidates" (2018). National Training Aircraft Symposium (NTAS). 18. https://commons.erau.edu/ntas/2018/presentations/18

This Presentation is brought to you for free and open access by the Conferences at Scholarly Commons. It has been accepted for inclusion in National Training Aircraft Symposium (NTAS) by an authorized administrator of Scholarly Commons. For more information, please contact commons@erau.edu.

Enhanced Learnability of Flight Techniques

Through the Introduction of Targeted Observation Flights with Ab-Initio through Advanced Flight Training Candidates

By:

Nicola O'Toole, Dr. John Robbins, Gary Carter

Flight Training Success: How is it measured?

- The industry needs pilots (AOPA and others)
 - 29,000 Pilots who will retire from cockpits at major airlines within the next 10 years
 - 117,000 New pilots who will be required in North America over the next 20 years, according to Boeing 600,000 worldwide
- Therefore: How can the demand be met:
 - Effectively and efficiently

Observation Flights To Increase Success

- One Key Element in successful flight training
 - Successful = Effective + Efficient
- How is an observer conducted?
 - Passive
 - Structured / Targeted
 - Observer as a crewmember



Our Experience

- Practical Side Observations augment learnability
- Academic Side Observations help with knowledge assimilation, retention, understanding, and correlation
- There is little empirical data, however, there are vast amounts of anecdotal data from testimonials.
- In addition, our experience.

Benefits

- Costs
- Proficiency
- Decision Making
- Time to Certifications/Ratings
- Safety
- CRM
- Less PIC but MORE flight experience.

Drawbacks

- Potential Negative Transfer of Learning
- Time Investment
- Instructor Limiting Feedback During Debrief
- Different Aircraft "Feel"

Where do we go from here?

- Definitive need to conduct qualitative and quantitative research to validate anecdotal data!
- Keep encouraging our students to observe!
- Develop Industry "buy-in" regarding observations and their benefits

Questions?

THANK YOU!