

**SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION:
QUESTIONS FOR THE RECORD**

**HEARING ON
FAA REAUTHORIZATION: PERSPECTIVES ON RURAL AIR SERVICE AND THE
GENERAL AVIATION COMMUNITY
APRIL 6, 2017**

**Written Question Submitted to Dr. Guy M. Smith, Professor Emeritus, Embry-Riddle
Aeronautical University**

Submitted by Chairman Thune

Question. Dr. Smith, in written testimony submitted for the hearing record, the Air Line Pilots Association (ALPA) said that the Pilot Source Study “makes the flawed conclusion that experience is not a predictor of competence”. Do you have a response to this comment or anything else stated by ALPA?

Answer.

Dear Senator Thune,

Thank you for the opportunity to respond to your question. Be assured there has always been an excellent relationship between ALPA and aviation academia. Many aviation college students benefit from ALPA’s Ace Club and “Cleared to Dream” program; and ALPA has been an active partner of the Aviation Accreditation Board International (AABI) in setting and maintaining the highest standards for collegiate aviation education.

In their testimony, ALPA stated that the Pilot Source Study “makes the flawed conclusion that experience is not a predictor of competence.” Several members of ALPA have attended briefings on the Pilot Source Study; however, the author of their testimony does not understand the study nor the rigorous research protocols employed. The Pilot Source Study did not study “experience” of pilots; experience is a broad construct that should be measured by one-on-one pilot interviews. We did not interview a single pilot; we visited regional airlines and did a comprehensive review of the pilots’ HR records; we recorded their educational backgrounds and their flying records prior to being hired by the airline. The Pilot Source Study also did not study “competence”; in fact, researchers who have attempted to study the competence of a group usually fail; competence is an individual aspect that “indicates sufficiency of knowledge and skills that enable someone to act in a wide variety of situations”.¹ Besides compiling information from HR records, the researchers collected data from pilots’ training records to determine pilots’ performance in training. Performance was measured primarily by determining whether a pilot successfully completed the training and whether they completed it within the scheduled footprint or if they needed extra training. The study concluded that there were several good indicators of pilot performance:

Years Since Graduation: ≤ 4 Years.

Aviation Degree: YES

Total Time: ≤ 1500 Hours
AABI Flight: YES
ATP Certificate: R-ATP

Highest Degree: Bachelor's
Previous Employment: Part 121
Military Pilot: YES

ALPA's testimony implies that the study is flawed because it doesn't show "what everyone knows" – that pilots with more flight hours have more experience and therefore are "better pilots." By their own admission, ALPA did not research their hypothesis. The Pilot Source Study showed that flight hours, as the sole measure of piloting skills, was not a good indicator of performance. **Rather, it showed that flight hours, associated with appropriate educational and experiential background, was a good indicator of performance.** In PL 111-216, Congress has already recognized the value of "appropriate academic background," and the industry is working to define "appropriate experiential background." As I mentioned in my verbal testimony, the industry is attempting to define "structured flying" and "disciplined flying." If we can determine that a pilot has successfully accumulated a sufficient number of flight hours in a structured, disciplined flying environment; we probably could state that the pilot is ready to be trained to be a safe and competent airline pilot.

After the hearing, I spoke for about 20 minutes with John Kausner of the Families of Continental Flight 3407. John asked me, "Why are you so much against the 1500-hour requirement for airline pilots?" I told him emphatically that the Pilot Source Study does not disregard the 1500-hour requirement; the study concludes that 1500 flight hours (an arbitrary number) does not indicate, in itself, that a pilot is safe and competent. I have been in pilot training most of my adult life. I have flown with pilots who have thousands of hours and should never be airline pilots. I have also flown with pilots with only several hundred hours who are safe and competent; I would entrust my 3 daughters to fly on their airplanes. This statement resonated with John, since he mourns for his daughter, Ellyce, who died in the Colgan crash. I told John that our study did not contradict the 1500-hour rule; the study showed that, if we consider flight hours and nothing else, pilots with more than 1500 flight hours did not perform any better than pilots with 1500 or fewer flight hours. John Kausner appeared to accept my response. We parted as friends.

As matter of professional pride, I am compelled to respond to ALPA's flawed statement that "the Pilot Source Study was sponsored by the very organizations who will benefit from the data." None of the seven researchers received a salary or stipend; the research was done as part of our academic contract. The graduate students who collected the data received a \$100 per day stipend. These stipends and all travel expenses were paid from a fund donated by two universities and five major airlines. No funding for the Pilot Source Study came from a regional airline, the Regional Airline Association (RAA), or the Aviation Accreditation Board International (AABI).

¹Business Dictionary. (2017). Retrieved from <http://www.businessdictionary.com/definition/competence.html>

Dr. Guy M. Smith
Professor Emeritus
Embry-Riddle Aeronautical University
<https://www.pilotsourcestudy.org/>