

2018 AABI IE Forum Table Reports

Notes taken by ERAU Student Intern Daniel Lee Leed57@my.erau.edu (801) 830-3678

Table 1 Name: Cindy Hasselbring

- It's not feasible to do so.
- Continuable supply and assistance chief instructor is what Auburn focusing on now.
- MEI is a challenge for them as well
- Horizon Air- Who's going to help paying students' debt.
- Difficulty to schedule fly instruction with airline schedule.
- Some airline does allow their pilot to fly instruct on their off day, but not every airline.
- Motivation for pilot to get back fly instruct after getting onto the airline.
- Solution- For retired pilot to get back fly instructing, what should be consider?
- Some Airlines are stacking up their simulator instructors from their retired pilots, research can be done with that topic.

Table 2 Name: Rick Mangrum

- Curriculum is unique at each college.
- Needs to figure out how to solve compensation, seniority, Part 121 time for upgrade for pilots who go back to fly instruct.
- Training, currency issue affecting insurance and liability needs to be determine.
- Airline partnership with flight training institution could come up with some incentives to attract pilots into the program.
- Part 121 has duty time limitation, it could affect scheduling.
- "Academic Leave" is a better name for "Instructor Leaseback"
- Standardization and familiarization could take up some time for new instructor.
- Certain airlines ban pilots from flying outside of the company.

Table 3 Name: Pete Russo

- They all agree the program is feasible, technology research is needed to overcome the current problem.
- Cockpit transition between jets and Cessna 172.
- Seasonal Problem- Airlines have peak season, and they can't give that up.
- "Instructor CodeShare" is a better name for the program.
- Geographic location- Pilots don't usually live near the university.
- Pilot consideration- They don't want to lose their seniority, and upgrade opportunity.
- "Uber IP"- Survey how many pilots are willing to do it, then create a platform for both IP and university.

Table 4 Name: Ray Thompson

- Maybe change the system, have airlines pay for the flight training.
- Pilot income is the first priority for the program.
- Balancing the seniority and fly instructing at the same time.
- Junior Captain might be a good fit for the program.
- Incentives could include free tuition for graduate degree.
- It has to be volunteering work, so If the air carrier can just fund the CFI directly, it could minimize some issues.

Table 5 Name: Nancy Shane Hocking

- Best Practice-Cape Air and Bridgewater
- Fly instructor 3-4 days at school, fly other days at Cape Air as FO
- Part 135 will be a great fit for the program; Part 121 could be difficult due to Union, Flight time, schedule.
- Universities and Part 135 Carriers- schedule a meeting
- Research needs to be done on instructors and students.

Table 6 Name: Lynne McMullen

- Feasibility- Different models are required for individual pairings; AABI developed footprint/ framework.
- Canadian airlines are willing to sponsor for CFI training.
- Retired pilots are willing to fly instruct again.
- Obstacles- SMS requirements; Company changes; Labor agreements; graduate's career aspiration; regulatory issues.
- Sunwing is going to fund instructor and have agreement with both pilot and the institution.

Table 7 Name: Todd Halverson

- Keep your students at your own institution.
- Instead of leaseback, we should delay the instructors from going to the airline early.
- Military vs civilian

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Table 8 Name: Carl Davis

- There is an instructor shortage worldwide, are there any possibility to use the technology to replace instructors?
- Captain vs First Officer shortage, the imbalance.
- MPL training has been used internationally.
- Expect population for people who are willing to move around the globe to fill up the gap.
- Growing airline vs country having negative growth on population (Japan)

Table 10 Name: Beth Bjerke

- Having industry management visiting the university for a period of time, better to identify the needs and ways to improve the program.
- Shortage of instructors causing the current instructors logging more time in a given period, where meeting their R-ATP earlier in their career and left the institution.
- **Table Notes from Beth Bjerke for table 10 via email 2018 07 19:**
 - Focus on expanding the leaseback concept to more than just CFIs - include faculty and other aviation professionals
 - Pilots and professionals on Leave of absence from airline can be used as adjunct faculty - unpaid by the airline so there needs to be a funding model
 - Adjunct faculty could be compensated with tuition waivers for them
 - Military leave of absence is adhoc - can we do education leave
 - Special assignment from airline to dedicate a pilot, dispatcher, mx, to educate at a University
 - Employees would self-identify as having characteristics and interests
 - Medical leave potential - use pilots who are on long term medical or disability; 55% of past 6 months pay rate
 - Low level management CFI retention
 - Can we adjust the pipeline to include lead instructors instead of regional partners; not for all, but for some
 - Yes
 - FAA Inspector Shortage...There is one

Table 11 Name: Dan Dornseif

- Possible Stakeholders- Airlines, Universities, Federal Government
- CFI Shortage- "Super CFI"?
- Need for more business research in identify the root problems- Defining the problem, political factors, economic factors.
- Can we use additional simulation to fill gaps?
- Can/should airline pilots be returned to the educational setting
- Can we enlist airline pilots for remote education?
- Financial incentives- Federal tax incentives for pilots (offset loss of pay) and airlines.
- FAA exemptions to Part 117.23 (flight time cumulative limitation)
- Establish & Maintain relationships between airlines and universities.
- Take pathway programs one step further- Provide student/graduate CFIs with seniority number.
- Seniority is important to line pilot, it can affect anything in your career.
- Advantage- Long term solution to CFI shortage; With extensive professional instructing experience, improved check airman pool.
- Challenges- Airline unions' Incentives for pilot; taxpayer buy-in, FAA regulation.

Table 12 Name: David Moxham

- Accelerate CFI curriculum at the universities.
- Incentives- Higher pilot pay, free tuition, etc.
- Higher start pays at airline for those with higher dual given hours.

Table 13 Name: Mike Lewis

- Use simulator to make those pilots who come back from either military or airlines back on proficiency.
- Utilizing the technology "VR" or "Avatar Instructor"
- All in the industry, universities, airlines, military needs to come up with some incentives.

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Notes Submitted by Panel Reporters

Table 1 Moderators: Auburn Bill Hutto & James Birdsong; ExpressJet; Hiwot Tadesse. Report: Cindy Hasselbring

Q1: Is the idea feasible? How long might it be in place at a given employee/university pair?

Auburn U

- Auburn U – four years ago had 120 declare aviation as a major, now about 350 students in aviation. Fast growth.
- Train their own, use own curriculum, some students come in with PPL
- Challenge is **continual supply** and need to hire some assistant chiefs. Need CFIs with experience to give **oversight** and mentor new CFIs. “Quality control”, Need CFIIs and those instructors who can teach instructors.
- Auburn U interested in a leaseback, but have questions.
- Need MEIs also, hardest to find
- While students are instructing with Auburn, they get the benefits of working for Envoy Cadet Program. Once students have instrument rating, have interview, conditional job offer, become an instructor, 3.0 GPA, once an instructor, Envoy pays the students, Auburn pays Envoy, able to build time

Horizon Air

- Curious who will pay for it, can universities provide a scholarship to its own students to hold them there a bit longer? Maybe have a contract to help pay back their student loans (\$10,000?) if they stay a year? Reduces debt and need for cashflow.
- Airlines might not let them leave to instruct.
- Who pays for this?
- Doesn't think once pilots go to an airlines they will want to return to a university.
- At regionals, pilots are just trying to build time to get Captain.
- Will majors suck up the regional pilots? Will regionals consolidate to fill needs?
- Horizon Air is allowing pilots to fly on the side – instructing, banner towing, etc. but only on their days off
- Horizon is buying back vacations, putting money out like crazy to keep pilots flying
- Perspective will need to change and CFI will need to be more as a career than it has been in the past.

Express Jet

- Takes 8-10 years to upgrade to Captain or move to majors
- Seniority is the holy grail of everything.
- Pretty stagnant to upgrade right now.
- Very complicated issue
- Use military model of giving someone all of their ratings for a time commitment, i.e. 6 years
- Regionals don't have a lot of money to provide for program, would have to be majors helping
- May be a Labor issue with the union

Issues

- Difficult to schedule flight instruction with an airline pilot's schedule and changes.
- Airlines may not let them go
- What's the motivation for someone at an airlines to do this?
- Who pays? Regionals? University? Majors?

Solutions

- Try to keep students longer by offering to pay off some of their debt and contract them to stay a certain period of time.
- CFI needs to be viewed more as a career than as a pass through.
- Need to weed out students who are unmotivated to help with the capacity issue
- What about using pilots on the backside of their career? Would need refreshing on instructing, GA, would have less scheduling issues, simpler to become a ground instructor first
- Unions & professional organizations can do messaging to help recruit instructors-CFIIs, MEIs, ground instruction
- Change leaseback term to academic-industry exchange

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Table 2 Moderators: Purdue Tom Carney, Republic, Valerie Penn. Report Rick Mangrum

1. This is feasible but it will not likely be a standardized one-size-fits-all.
2. Obstacles: Labor agreements in particular seniority numbers; 2) maintaining currency while serving back at the institution; 3) which entity will insure the activity while back at the institution and where is the liability?; 4) pilot buy-in to the program in the first place.
3. Instructor work statement: will depend on the needs of the institution. It was discussed that the most likely be as a check-instructor or other position of evaluation.
4. Compensation:
 - a. Institution would likely need to pay the CFI rate and the airline make-up the difference
 - b. Time frame is important e.g. impacting upgrade time
 - c. Company provided insurance and benefits would need to be in place
 - d. Institutions may want to consider some sort of housing arrangement while instructors are working there
5. Advantages/Disadvantages: Airlines will keep the supply of pilots more full because when a senior instructor leaves an institution it stops the training of several students and possibly for the rest of the semester or longer. This program would mitigate that to some extent. Institutions would benefit from having instructors with airline experience and less disruption of flight training for students.
6. Is the name ok? NO. Suggestion: Academic Leave Program
7. + 8. Percent of instructor's time: A delayed entry to the airlines by one semester or even an academic year is probably best. If a return program is in place then there should be a short-term recurring option e.g. 1 week/month and a long-term option of a semester or academic year.
9. Impact on Pilot: 1) delay of Part 121 experience/hours; 2) delayed upgrade; 3) might allow _____ pilot to be present on station at an institution during times of convenience e.g. family illness, birth of a child, other difficulties; 4) educational benefits by allowing time to get a Master's degree; 5) extended deferral of student loan repayment period.
10. Alma Mater only? Depends on time frame. Short-term = alma mater, long-term = could be anywhere depending on geography and uniqueness of the airspace etc. Some schools it would take a long-time to get up-to-speed with procedures if it wasn't an alma mater.
11. Additional Questions? Should airlines pay for CFI currency? Should the FAA be petitioned for an exception to total flight time rules to allow for this program to not restrict airline hours? Would the airlines support the expense and logistics to have a steadier pipeline of new pilots.
12. Research: Yes. Initially we should survey institutions, airlines, students, graduates and the FAA.
13. Simulation Technology: Yes for currency if long term assignment or for programs with extensive simulation in the curriculum then the pilot could serve as a sim instructor.

Table 3 Moderators: Vaughn College Pete Russo & Deb Henneberry, Piedmont Lynnette Darnell Report. Pete Russo

Intro: Table 3 consisted of a diverse group of Industry/Educator/US and International, experts in the industry shortfall in new pilots, AABI educational capabilities, and various opportunities and challenges. We discussed our chartered question, #3, then went on to briefly cover the remaining questions, 1,2, and 4-13. The fruit of our discussions was presented to the assembled attendees at the AABI Industry/Educator Forum by moderator Russo. The outline of this presentation follows:

1. Is the Leaseback idea feasible? Yes, if the traditional and negotiated terms of professional pilot employment are respected. Most of the airline and commercial pilots are represented by unions, who have painstakingly negotiated individual labor contracts that address items such as seniority award, off-property work permission, monthly and yearly flight hour accumulation, pay, community service and many other topics. Navigating these obstacles could be difficult.
2. Obstacles in addition to those discussed above, include availability, geography and student continuity. Our table thought that these last three could be overcome by placing the burden of volunteering and participating on the individual instructor, who would set a schedule that complied with the desired airport, time allotted and in working with an assigned flight school to maximize student continuity.
3. IP work statement: Instructor pilots should announce their availability, experience and competence at all phases of flight instruction, simulator, classroom and flight. These competencies could be matched with the needy college or flight academy in the stated local area, and a mutual support schedule and pay rate agreed upon. The IP would gain income, satisfaction, and a degree of community support credit.

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4. Compensation: IP must work within the contract with the employing airline, and any time exceeding the contract must be mutually agreed upon between the IP and employer.
5. Advantages/Disadvantages to participants. The airline supplying the IP will get free advertisement to prospective employees who would view the airline pilot as a role model for their future career. Personal recommendations could follow for the student. If the IP is a veteran, the same accrues for military pilot recruiting, which is also in need of pilot candidates. The college shortage in pilot qualified instructors applies not only to IPs, but also to adjunct professors who are pilots or professionals with masters' degrees. The advantages to the institutions are better student recruitment, more credible education, and career motivation, which improves the retention and graduation rates.
6. "Instructor Lease-Back" seems to be a de-humanizing term. Initially we proposed "Code-share", but this term is already in common use. We also like "UBER-IP". Our suggested program would be for a central commercial entity to establish an online communication system designed to match IPs willing to work with institutions and schools in need of instructors. Data exchanged would include location, days and hours available, qualifications, etc. Requests for assistance could be entered online, and responses could then be evaluated and interviews arranged. In case this idea "flies", Table 3 has copyrighted UBER-IP© under their new name, Table3, LLC.
7. % of time available: Varies extremely by seniority, and resultant time off from commercial work.
8. % of time airline can release IP for work: Varies by seasonality of airline work. Passenger airlines are busy all summer, and on holiday and seasonal vacation times. Varies by airline mission and schedule.
9. Impacts on instructor: All good: much smarter in basic aeronautical knowledge, more satisfaction in career, possible personal kudos, slight increase in income, and the ability to fly visual maneuvers at low altitude. This last item would also be the biggest drawback, in that the personal risk to the IP would be larger when operating in the General Aviation realm.
10. Can IP choose institution? Under Table 3 solution, UBER-IP, the geographical participation would be determined through agreement between the IP and the school. Most airline pilots do not live near the college they graduated from, nor do they live near their airline base. They may not even know that there is an aviation college near their home, unless there is an UBER-IP program to connect IP to school.
11. Additional questions: None discussed.
12. Research Project: Survey institutions on severity of IP shortage. Ask about aircraft shortages as well. Survey airline about IP-qualified pilots and their willingness to participate.
13. Simulation and training technology? Yes, these are both important aspects to modern airline training programs, which are optimized to provide appropriate learning and practice for pilots on a timely basis. Several colleges, including Vaughn, have grants from airlines (JetBlue) to provide simulation and equipment familiarity to local high school students. The plan is to plant a seed of motivation which could grow into a transformative airline career. Inner-city young adults are vastly more removed from experiential opportunities in aviation than their suburban or rural counterparts. Yet the population density of cities means that statistically the solution to future pilot shortages is more likely to be found in the city. Also, all airline pilot bases are located at urban airports, and many of these experience difficulty in finding pilots who are willing to live near the airline base.

Table 3 Reporter: Capt. Pete Russo, Ph.D. Vaughn College Queens, NY; Chair Aviation Department

Table 3 Participants: Christian Roper (PSA), Mike Duzy (PSA and CFI Pipeline), Shuguang Sun (Tianjin Engineering), Ying Zhang (Tianjin Avionics), Jonathan Benton (American Airlines and APA), Eric ---- (Kent State)

Table 4 Moderators: WMU Ray Thompson, Endeavor Air Andrew LaSusa. Report Ray Thompson

1. Who pays?
 - a. The school pays the full cost of the pilot salary.
 - b. The school pays its normal rate and the airline makes it up.
 - c. The airline pays the full cost of the pilot salary.
2. There would need to be a guarantee of compensation using a formula around average hours per month. Would need to be salaried.
3. Issues
 - a. FAA rules
 - b. Seniority
 - c. Has to be voluntary

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- d. Risk – liability and chance of a deviation
- 4. Have to define a clear benefit for the airline
- 5. Who would be most interested? We suggest a junior captain.
- 6. Group 4 felt there was a greater benefit and cost effectiveness for the airline to fund the CFI rating.
 - a. Identify promising students.
 - b. Provide a qualified job offer
 - c. Fund the CFI
 - d. Require a specific period of time or billable hours at the school
- 7. For example, if the school paid a CFI a salary of \$50K and the airline has to make up \$40K, that could fund 4 CFI ratings with no disruption to the pilot career path for current airline pilots.

Table 5 Moderators: Bridgewater State Elmore Alexander & Cape Air Levi Carroll. Report: Nancy Shane See PowerPoint

Table 6 Moderators: Seneca Lynne McMullen & Sun Wing John Hudson. Report: Lynne McMullen See PowerPoint

Table 7 Moderators: ERAU Parker Northrup, USAF Scott Lewis. Report: Todd Halverson

- Regarding the AABI instructor issue, my office is going to explore an option that may help. Please realize these things take time with coordination across many agencies.
- There are ~22 AABI Universities that also have ROTC. In 2016, AFR, in coordination with the Holms Center and our Pentagon staff, created the Reserve Categorization Process (RCP). The intent is to identify volunteers for AFR rated assignments prior to any Regular Air Force (RegAF) categorization. Essentially, this program allows ROTC cadets to attend pilot training in the AFR-- assuming they are selected from our yearly ROTC Oct pilot selection board.
- --Cadets coming to AABI universities with a PPL can achieve CFII/MEI by their junior year--most by their second semester at a cost of \$55K (\$40K of flying time and \$13K for the CFI class). However, ROTC doesn't cover the cost of flying hours. We can possibly explore some kind of compensation to assist ROTC cadets/AABI non-ROTC in gaining that qualification. In turn, those individuals would be required to sign on with the AFR with the intent of them attending UPT post-graduation/commissioning.
- --Parker Northrop, ERUA Flight Dept Chairman and I discussed this option at table 7 of the forum. His ultimate goal (not sure about other schools) is to get two full years of instruction from new CFIs (Their entire senior year +1). I am not sure we could wait that long to get them in training, but we will look into it.
- --This option also helps solve the issue of cadets/candidates not continuing to fly post-UFT selection. And why would they...if the AF is telling them they will be sent to Pueblo for IFT, why would they continue to rack up debt flying?
- --It also solves, albeit in small numbers, CFIs staying at school teaching post grad.
- --Working with Scotty Lewis and his team, we need to capture the cadets in the JROTC PPL program and figure out a way to get them to AABI schools, with ROTC as a viable option.
- --ROTC is important to us because it alleviates the need for OTS and, with current CFIs, they can skip IFT at Pueblo all together. We could also consider non-ROTC as an option.
- In the end, we hope AFR leadership recognizes the need to compete with the limited resources coming out of college. Delta, and I am sure others will follow, are actively recruiting from these school for pilots. We have to do the same to ensure our requirements are met.

Table 8 International: Carl Davis; Charge: Explore Mitigating Actions on Airline & OEM Instructor Supply Chain

Table Attendee make-up:

Two Maintenance Training personnel from a Chinese University

One member of Academia from Greece

Two members of Academia from Turkey

Three members of Industry from the USA

Given the composition of the panel members, it was immediately decided that addressing the questions supplied to the other tables would not bear fruit.

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Our first observation was that the world-wide aerospace industry personnel shortage, when examined from a holistic perspective, is incredibly complex and inter-connected. Many times, a fix to one area impacts a different area in a negative way.

- The first question we asked ourselves was, "What does the pilot shortage look like elsewhere in the world?"
 - The panel members from Eurasia noted that there are countries in the EU experiencing gluts of pilots (Germany & Switzerland).
 - We pursued that assertion to determine why that may be the case.
 - Steve Brown posited that the economic cultures of those countries was far more strategic, comparatively, than the economy of other Western countries (i.e., the USA). The USA's economic culture was classified as "opportunistic".
 - We further discussed the idea that Germany & Switzerland's economy may not be as productive as the US, but there are merits to thoughtful planning. It was agreed that US airlines will likely never change their economic culture of accepting more risk in search of more opportunity.
 - It was noted that some areas of the world are suffering a shortage of airline qualified Captains
 - This shortage is driving examination of ways to expedite the movement of First Officers to the Captain's seat, in a shorter time than it now takes (between four and 10 years in most cases).
 - The apprentice model of flight training and experience normally required to move up will be difficult to accelerate. Much of the learning is experiential and would be very difficult to simulate.

The next topic of conversation was about the required hours that a cadet had to spend with a CFI in the plane.

- Could regulations be changed to lower the number of hours? It was estimated that by the time the cadet goes from 0 TT to a CFI they have likely flown with a CFI for 180 hours. Dropping that amount by 20 – 30% would make a substantial dent in the cost of training and free up the CFI to pick up more students, a force multiplying action.
- Use of more simulation was suggested as a tool to implement the decrease in CFI-accompanied time.
- Career incentives for CFIs was the next topic
 - Pay, airline line numbers, type ratings were proposed as ways to attract & retain CFIs
- Our Chinese members were asked about how young people in China end up in the aircraft maintenance profession.
 - Most young people in China are not familiar with the actual job of being an airline mechanic.
 - Young people enter training programs because it "looks interesting".
 - Once they enter the training pipeline, they are pretty much stuck with the career path.
 - Both Chinese guests noted that a vast majority of the young people that complete the training are very disappointed in lifestyle of being an actual aircraft mechanic.
 - It was suggested that airlines or the CAAC need to spend more time educating youth in primary and secondary schools, to increase the satisfaction level of those who select the career path.

Other comments/topics covered at the table were:

- Will this shortage re-invigorate the MPL or more MPL-like ab initio programs around the world?
 - This is being seen. China is leaning toward MPL-like ab initio training programs for their cadets.
- The Ex-Pat pilot population
 - IT was agreed that there are not enough pilots world-wide that are capable and willing to re-locate themselves and their families to new countries and cultures.

Table 10 Moderators: UND Beth Bjerke; UAL Chuck Hogerman & Andy Allen. Report: Beth Bjerke

Instructor Leaseback Program

1. Focus on expanding leaseback concept to more than just CFIs - include faculty & other aviation professionals
2. Pilots and professionals on Leave of absence from airline can be used as adjunct faculty - unpaid by the airline so there needs to be a funding model
3. Adjunct faculty could be compensated with tuition waivers for them
4. Military leave of absence is adhoc - can we do education leave
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6. Employees would self-identify as having characteristics and interests
7. Medical leave potential - use pilots on long term medical or disability; 55% of past 6 months' pay rate
8. Low level management CFI retention

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9. Can we adjust the pipeline to include lead instructors instead of regional partners; not for all, but for some
10. Yes
11. FAA Inspector Shortage; there is one

Table 11 Moderators: Utah Valley Dan Sutliff, Envoy Jessica Hines, SWA Dan Dornseif. Report: Dan Dornseif See PowerPoint **General Questions**

1. Question: Would a tax advantage work to either pull pilots from the line or retain instructors after graduation from universities?

Consensus: Some in our group felt that it would be difficult to justify feds funding this exclusively (i.e. tax break) when airlines are amazingly profitable (for now). This would be a hard sell for the public until the crisis is well advanced.

2. Question: Is there really a CFI shortage?

Consensus: Most agree that there is a CFI shortage, but one university in our group has not had any issues with retaining CFIs. He theorized that good treatment and culture as possible reason.

3. Is there a shortage of 2-year "Super" CFIs?

Consensus: Yes

How do we correct the CFI/pilot shortage? Explored Concepts:

Option 1: The use of established airline pilots taking leave from the line to instruct.

Option 1 Advantages:

- a. Possible supply source of experienced CFIs and "Super" CFIs
- b. Good mentoring possibilities.

Option 1 Challenges:

- a. How do we motivate them?

-Tax incentives- Hard sell to the public. *Unlikely as a single source*

- b. Are airline pilots the best source of CFIs?

-One university had concern that airline pilots will not make the best instructors. The group could not agree as opinions varied widely. *This may be a basis for an AABI study.*

- c. Airlines would have to give "reserves-like" leave to the CFI pilot.

-Airlines are unlikely to do this until there is a real crisis, at which point, they may not be able to comply due to shortages.

Unlikely

-Pay compensation: Making up for the airline/university pay differential-

-Airlines/military are unlikely to pay pilots for off-line flying.

-Universities cannot afford it.

-Federal government will be a hard sell.

-Most pilots are unlikely to take a substantial pay loss

Would need to be shared between all above

- d. FAA would likely need to provide CFI relief on CFR 117.23 flight time limitations (especially for regional pilots who typically fly close to limits). *Possible*

Option 2. Retain graduates for a predetermined amount of time at university for CFI duties. Give seniority numbers (not just employee numbers-very different) to CFIs at a partnered airline when they first begin teaching at university. Airline, university, or federal government might share the salary subsidy to bring graduate CFI's pay in line with first year regional F/O pay.

Option 2 Advantages:

- a. Likely solution for the CFI/Super CFI/pilot shortage
- b. These candidates are fresh with procedures, specific aircraft types, and the university culture.
- c. Seniority is very valuable to the CFI and is likely to be a significant motivator to properly mentored and informed CFI.
- d. Experienced flight instructors, who gain experience as line captains will give the airline an excellent supply of Check Pilot candidates. Those who are not Check Pilots will have a deep understanding of the training process and are likely to do better than non-CFI candidates.
- e. Requires no CFR 117.23 latitude

Option 2 Challenges:

- a. Cost of subsidizing graduate CFI pay to equal first year regional F/O pay.

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- Perhaps a mix of funding from partner airline/military, federal government (perhaps through tax incentives), and the university. *This is likely solvable with proper blending of responsibility and cooperation.*
- b. When the CFI arrives at the airline with considerable seniority, upgrade could come too fast with the CFI lacking adequate line experience. Minimum line flight times/time in aircraft type limits would have to be instated to retain a high level of airline safety. *Solvable through rule-making/agreements.*
- c. A way would need to be devised to prevent CFI pilots from making lateral moves between regional airlines early-on. *The generous seniority policy would likely minimize this naturally.*

Best Solution: Our group believes that option 2 gives, by far, the most advantages with the least number of difficult challenges.

Table 12 Moderators: ERAU Juan Merkt & Skywest Dave Moxham. Report: Dave Moxham

Just as the regional airlines are experiencing a shortage of qualified pilots, the universities and flight schools are also experiencing a shortage of instructors, specifically the “super instructor.” I use the term to describe an instructor with two years’ experience as an instructor. This is significant, as an instructor must have 2 years’ experience as an instructor in order to teach other instructor candidates. Universities are concerned that they cannot keep instructors past two years & as such have fewer and fewer current “super instructors” with two years’ experience to be able to teach new instructor candidates. Table 12 had a robust discussion. I expressed the regional airline concern regarding a lease back program with regard to current SkyWest work load for pilots, duty time rules, logistical issues with housing, seniority, pay, & training costs. I know other regional airlines also expressed the same concerns as a whole.

Our table decided on three proposed mitigation strategies:

1. Accelerated Curriculums
 - a. Universities should develop curriculums accelerating current flight training to allow pilots to attain the rank of instructor in 2 years or less, then allow that instructor to teach while finishing the degree program
2. Incentives
 - a. The universities should create incentives to keep instructors longer. Simply put, I used SkyWest as an example for instructor incentives. We have little turnover in our instructor ranks due to our instructor quality of life and our high instructor pay. Similar incentives at the university level may keep instructors long enough to help solve this problem. It was suggested that instructors from universities we partner with be added to the SkyWest “soft landings” program.
3. Targeting a different group of pilots (instructors) for lease back
 - a. It seemed in the infancy of this proposal, universities were targeting the instructor lease back program toward the most junior pilots at regional airlines, pilots who had recently left university instructor positions. Our table thought universities should target senior captains and FOs, meaning pilots with good pay and seniority (lots of days off), who simply want to give back to their Alma Mater or a local University on days off.

Table 13 Moderators: Gary Morrison & Michael Lewis. Report Mike Lewis

Purpose: Explore institution and airline or USAF agreements for an employment model where new CFI graduates acquire a job & seniority number with a partner airline and are released back to their institution to provide instruction services.

Questions & Response Summary: (order as discussed in the group)

(13) Can simulation & training technology be an effective component of the Instructor lease back program?

- Leaseback CFI can utilize advanced Level D type simulators or FTD Level 6 to gain proficiency or retain it in higher level flying tasks than what they may perform training basic students for Private Pilot licenses. Thus assuring a retention of higher levels of flying or building it after an immediate collegiate program
- How we train and use simulators can still advance. Today's high fidelity Level D FFS type simulators can accomplish far more actual live flight training toward a rating than is even allowed today by the FAA. This is evidenced by international Multi-Crew Pilot License (MPL) programs. Further technology advances in AR/VR and non-motion FTDs can accomplish more training to reduce live flying activities or at the minimum maximize live flight training for more advanced skills at a lower flight hour level
- The advanced or increased use of simulators can not only assist with screening of the best candidates but increase the pipeline of students if utilized in a flight training regimen at younger ages than even High School.

(1) Is the idea feasible? How long might it be in place at a given employer/university pair?

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- Is there a way for industry and labor organizations to give lease back instructors individual seniority #'s while performing Leaseback duties? This would minimize the negative impact of delaying as an instructor after graduating from a collegiate flying program and remaining as an instructor
- Continue until the pilot shortage is smoothed out with an acceptable or balanced career pipeline path verses the extreme ups and downs of pilot demand history.
- Until the program isn't needed
- Remember – you generally get what you reward. What pilot/instructor behavior is rewarded – if they are leaseback instructors how are they rewarded?

(2) Obstacles? i.e., labor agreements, availability, geography, CFI/student continuity, etc.

- Geography could be used as an incentive to offer leaseback positions at desired locations or ones different than the Instructors current ones
- While going back to the original college is the easiest – providing new diverse opportunities can create freshness and help new pilots learn how to adapt to new situations.
- The 100 hour cross country requirement could be solution by the school providing a block of hours to cover that flying on their own at no charge.
- Night & Cross country time are a limiting factor

(3) Instructor's work statement, i.e. general instruction, phase check airman, lecture.

- Needs to be tailored to the University's needs and qualifications
- One solution for senior leaseback instructors is to use them as the check or stage pilots for junior instructors or mentors.

(4) Compensation for release time, and which entity (institution/employer) pays?

- The university pays standard instructor salary, employer pays the difference so leaseback instructor is cash neutral
- This is a challenge, but may drive to a longer term student upon graduation from a college or for junior airline/military instructor pilots verses more senior higher payed instructors
- Airlines aren't likely to support this program financially until it's a severe crises. The more logical solution is for the airlines to push to single pilot ops or RPA ones for Cargo before offering significant financial funds to the solution.

(5) Advantages/disadvantages to institution, airline, USAF, & students receiving instruction?

- Students benefit the most with more senior instructors. However, the airlines can benefit by having better trained students from the senior mentor/leaseback instructors. Continue until the pilot shortage is smoothed out with an acceptable or balanced career pipeline path verses the extreme ups and downs of pilot demand history.
- Find a way for more USAF ROTC students to become instructor pilots while in college as part of their "leadership training" who can also assist the collegiate aviation programs. The JROTC Private Pilot program could provide a rapid venue for future college ROTC students to become instructors in their first 2 years at a college.

(6) Is the name "Instructor Lease-Back" OK; different name for technical/political reasons?

- Keep it until something better

(7) Practical % of instructor's time productively used by the university, and in what role(s)?

- Determined by the university

(8) Practical % of instructor's time that airline can afford to release back to the university?

- TBD – long enough to assimilate local University's procedures and assist with smooth flow training development
- Likely 2 years min

(9) Positive/negative impacts on an instructor participant's career in such a program?

- Ideally this program should address the significant Student Loan challenge most students have. An average of \$250,000 per student. Unless a lease back program assists with this, students will drive for higher paying jobs outside the colleges to start repaying these debts sooner.

(10) Can we allow "Instructor Lease Back" to other than Alma Matter? Pros & Cons?

- Should be the goal not the mandate?
- Need to populate all colleges
- Provides a diversity opportunity for pilots and builds the capability to adapt

(11) Table groups are invited to pose additional questions related to their topics.

- Impact of Automation to single pilot or RPA aircraft?

(12) Can we frame a Collaborative Research project to measure effectiveness of this program?

- Yes...need a sponsor airline or USAF organization to do such

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"Table XXX"

AOPA Magazine August issue included a column by Barry Schiff which addresses another idea for resolving the instructor shortage. A number of table participants also suggested this concept. With gratitude to Captain Schiff, whom I wish had participated in the Forum, I include a scan of that column so that we can explicitly include the concept in our further deliberations on how to address the academic instructor supply.

PROFICIENT PILOT

CFIs MIA

Could retiring airline pilots fill a training void?

THROUGHOUT MY CAREER there have been several threats of a pilot shortage. None ever materialized. Until now, that is. For the first time, there really does appear to be a shortage. The major airlines are siphoning candidates from regional carriers at a startling rate, and the regionals are finally having to pay pilots what they're worth. Starvation wages are becoming a thing of the past.

The demand for pilots is increasing for two reasons. Increasingly more pilots are reaching the mandatory retirement age of 65, and the airlines are expanding their fleets. There is, however, a third reason for the shortage. In 2013, the FAA substantially increased the minimum requirements to qualify as a first officer (co-pilot) on a U.S. air carrier. This was partially in response to the crash of Colgan Air Flight 3407 near Buffalo, New York, in 2009 (the last fatal crash of a U.S. airliner). Instead of needing as little as a commercial pilot certificate with only 250 hours logged, new applicants now must have an airline transport pilot certificate (ATP) and a minimum of 1,500 hours (with exceptions).

As someone retained to conduct an in-depth study of the performance and backgrounds of the pilots involved in the Colgan crash, I can state emphatically that these increased requirements would not have helped to prevent the Colgan accident. This tragedy was not caused by a lack of experience. It was caused by incompetence. The captain was incompetent, as was the airline for having hired and retained him. His record of failures was alarming.

As a matter of fact, I cannot think of any U.S. air carrier accident in the jet age that would have been prevented had these increased requirements been in effect. Nevertheless, they are contributing to the pilot shortage because they discourage many who cannot afford the substantially increased cost of obtaining the required training and flight hours.

Perhaps the most popular and expeditious way to build flight time is to work as a flight instructor. In some cases—and perhaps many more than we realize—flight instructors eyeing an airline career perform a disservice to their students because they are not as dedicated to the business of flight instructing as they should be, thus shortchanging their students. And when these usually young CFIs obtain the necessary flight time, they're spring-loaded to jump off to the big leagues, thus leaving their students and flight schools high and dry. The result is an increasing shortage of flight instructors.

There is, however, a large pool of potential instructors that could be tapped. These are the thousands of airline captains forced to retire at age 65. Many of them miss flying and would consider returning to the game. Think about it. Wouldn't you love to obtain instrument training, for example, from someone who has been there, someone with tens of thousands of hours who has actually flown through blizzards, shot approaches in pea soup fog to Cat III minimums, coped with frontal systems of all sizes and shapes, and knew all the while how to do it safely? Wouldn't you love to tap the wisdom of such a pro?

The industry—perhaps with FAA assistance—might consider developing a recruitment program to convert some of these professionals into flight instructors (particularly those with general aviation backgrounds). It would be important, I think, to incentivize them by creating a more direct and less tortuous route to the flight instructor certificate. After all, these people are already experienced instructors because of having spent decades instructing and coaching their first officers. (Yeah, I know. Not all airline captains are good instructors. I could tell you some horror stories along those lines, but that is a column for another day.)

Such "senior" instructors have so much to share, and they could provide their students with more meaningful experiences.

In the meantime, there currently are many instrument flight instructors (CFIs) who have never even been in actual IFR conditions. Seriously. Many of them were trained at desert airports in the Southwest, for example, and don't even know what a cloud looks like. I'm obviously exaggerating, but when weather moves into these desert areas, you don't want to be in a small airplane. Conditions can change from beautiful to violent in a flash. There is rarely a benign layer of stratus there to practice actual arrivals and departures. You'd also be surprised how many instrument ratings and ATP certificates are issued to pilots who have never been in actual conditions.

One of the most frightening experiences a new instrument pilot can have is penetrating weather and shooting an approach for the first time and when alone. It's spooky. Training from a retired airline captain could ameliorate that.

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also authors the popular quiz, "Test Pilot," which he introduced in 1994 and for which he has thus far developed 3,486 challenging questions.