

# DOWLING

C O L L E G E



SCHOOL OF AVIATION

## Challenges of Aviation Education

From Zero to ATPL – International Conference  
of Flight Training and Aviation Education

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# About Dowling College



- Undergraduate degrees in Aviation Management and Aerospace Systems Technology.
- Graduate Masters of Business Administration (MBA) in Aviation Management and proposed doctorate (PhD) in Aviation Management.
- AT-CTI approved school
- Fleet of 16 training providing both FAR Part 61 and 141 training.

# Aviation Education



- Challenge finding qualified faculty with technical and academic backgrounds.
  - Not all pilots make good flight instructors, not all flight instructors make good academics.
  - Accreditation and tenure require contribution to industry through research which is often foreign to those with a technical background.
- Challenge finding qualified students with desire and means.
  - Industry doesn't provide an attractive career. Brightest students go towards high paying careers in business and technology.
  - Only students with true passion can overcome the challenges and endure the sacrifices required of our industry.
  - Many qualified graduates move on to more promising careers in aviation management or other fields after not finding jobs or experiencing the frustrations of entry-level pilot careers.

# Economics of Education



- Rising Cost of Flight Training
  - From 1965 – 2005, the cost of aircraft rental (C152) has increased more than 10x (\$5 - \$52) and instruction has increased more than 6x (\$4 - \$25).
  - In the same period, the average minimum wage has increased from \$1.25 to \$7.00 per hour, only a 560% increase.
  - The result is students have to work 10 hours to pay for one flight hour today as opposed to 7 hours per flight hour 40 years ago (Fairbairn, UAA 2008).
- Borrowing is a necessity at a collegiate flight program.
  - At Dowling College, students are expected to spend approximately \$40,000 - \$50,000 for 250 hours of training.
  - At this rate, students would have to work part-time for 5 – 6.5 years to earn enough at minimum wage to pay for their flight training alone.

# Economics of Education



- Rising cost of college education.
  - After tuition, fees and residence; Dowling College graduates can expect to graduate with a bill of approximately \$100,000.
  - Add another \$40,000 - \$50,000 for flight training expenses.
  - At current rates, graduates with \$150,000 in loans will owe approximately \$1726 monthly on a 10 year repayment plan beginning six months after graduation.
- Falling entry level salaries
  - The average base hourly wage for a turbojet first officer at the top 10 US regional airlines as of December 2008 was \$23.50, with the average guaranteed salary just over \$21,300 per year before taxes.
  - This figures to be approximately \$1775 per month.

# Economics of Education



- Are we overeducating the technical workforce?
  - Most airlines only require a high-school diploma, but students are pushed to a 4-year degree.
  - Core competencies of a commercial pilot are not developed in college curriculum (math, science and arts courses).
  - Are today's college graduates better prepared than past generations of incoming pilots without degrees?
- Devaluation of education
  - High school graduates are 'pushed' into post-secondary education.
  - Colleges and universities are pushing through graduates to meet financial obligations and accreditation standards.
  - The mass-production of college graduates raises the bar for all candidates and commoditize the value of a college degree.

# Solutions



- Revised curriculum
  - The Multi-crew Pilots License (MPL), FAA Industry Training Standards (FITS) and competency based training curriculum are all evidence of current solutions to address these issues.
  - Flight training curriculum should require practical skills for careers as a commercial pilot (i.e. CRM, avionics, adv. navigation, etc) taught in collegiate flight programs.
  - In addition, the curriculum should also develop decision making, problem solving, and critical thinking skills.

# Solutions



- Apprenticeship programs
  - The quality and availability of online undergraduate programs in aviation is growing dramatically and provides young pilots with an opportunity to obtain their degree while building experience.
- US / EU adopt model similar to Australian experience.
  - Students are screened and selected by airline after completing the second year of a four year program.
  - Students enter third year as airline ‘cadets’ and complete MPL and type conversion by years end.
  - Students then enter fourth year as First Officers in the airline.
- Gulfstream Academy in the US offers a different but similar model.



# References



- Fairbairn, Gerry (2008). What Brings Students to Aviation: Observations and Implications. University Aviation Association Fall Education Conference. Denver, Colorado (15-18 October 2008).
- Financial aid calculations from [finaid.org](http://finaid.org).
- Pilot salary data obtained from [airlinepilotcentral.com](http://airlinepilotcentral.com) based on the Regional Airline Association (RAA) 2009 Annual Report list of Top 50 Regional Airlines.