

22 October, 2010

UNSW



JASON H MIDDLETON
PROFESSOR AND HEAD
Department of Aviation

Committee Secretary
Senate Standing Committee on Rural Affairs and Transport
PO Box 6100
Parliament House
Canberra, ACT 2600

Dear Secretary,

Re Pilot Training and Airline Safety


The University of New South Wales (UNSW) is holder of Air Operators Certificate S553086 which authorises Flying Training and Aerial Survey, and the activity is administered by the Department of Aviation in the Faculty of Science. Managing this activity is Mr Brian Horton, Director of Flight Operations and Chief Pilot, and myself as Head of the Department of Aviation. Our organisational structure has the Director of Flight Operations reporting to the Head of Department.

Under the AOC we operate a fleet of Diamond and Piper aircraft owned by UNSW, from premises leased by UNSW at Bankstown Airport. All instructors including the Chief Pilot, the Chief Flying Instructor and Standards Manager are employed by UNSW. We presently fly over 6000 hours a year in our training capacity.

Mr Horton's career spans nearly 40 years in training and he has held a number of positions as Chief Pilot and Chief Flying Instructor, and a period as Training Captain at East-West Airlines. He is also an Authorised Testing Officer (ATO) for CASA, and recently sat on the CASA Flight Training Panel. I have been Head of Department of Aviation since its inception in 1995, and have held a Commercial Pilot Licence since 1973.

Attached is a submission prepared by the two of us, and either or both are prepared to attend and give verbal submissions if requested by the Committee.

Yours/~~Yours~~sincerely



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SUBMISSION TO THE RURAL AFFAIRS and TRANSPORT REFERENCES COMMITTEE
by

Jason Middleton and Brian Horton

DEPARTMENT OF AVIATION

FACULTY OF SCIENCE

THE UNIVERSITY OF NEW SOUTH WALES

22 October, 2010

1. Flying Training Standards for Professional Pilots in Australia

The comments in this section relate to the adequacy of the system and culture that currently exists in Australia for training pilots who will be recruited by the airline industry. Industry predictions are for a rapid increase in demand for pilots in the Asia Pacific region over the next two decades leading to a shortage of adequately trained aircrew. Concern has been expressed at the prospect of pilots with little or no commercial experience being recruited from flight training providers and moving into co-pilot seats in transport operations.

This leads to a number of issues, including but not limited to; the adequacy of the current system, the training industry's output in terms of flying standards, aeronautical knowledge and personal development, degradation of current experience levels (and therefore safety), training costs, shortage of instructors and inconsistent standards.

Of the stake-holders, only the airlines themselves have a full understanding of their requirements, and therefore the adequacy and shortcomings of the present training system. The airlines need to define just what is required from the training system and provide a clear delineation between the obligations of the training industry and those of the training system within airlines. As an aside, it is important that consideration is given to the requirements of the whole spectrum of airline operators and not just the major operators.

Once the airlines clearly define the attributes of the pilots that are needed, then a system can be developed to produce such a pilot. Consideration must be given to all aspects of the training including knowledge, skills and attitude (personal attributes).

The current system provides three pathways to airline entry. The traditional ad hoc accumulation of experience and qualification; the integrated Commercial Pilot Licence course generally conducted full time; and the Multi Crew Pilot Licence (MPL). The MPL has so far had a low uptake in Australia and is still in the development phase whilst the other pathways have a number of limitations and inadequacies. Each of the

systems has the potential to produce good standards but a major overhaul is needed with emphasis on the following points.

- Selection of student pilots to undertake training. An important factor in the success of training is proper selection of trainees rather than the acceptance of all who express an interest and the capacity to pay.
- Adequacy of flight training providers in terms of staff, aeroplanes, theory provision, simulation and facilities. Thought should be given to an accreditation system for airline standard training providers, administered by the airlines.
- Defined graduation standards where they differ from those of the CASA (which are in effect minima).
- Suitable syllabus content. The current theory syllabus is grossly out of date. The Flight Training Panel has recommended that CASA provide resources to review and amend the syllabus. To date the flying syllabus has emphasised navigation at the expense of general handling, and given that modern technology (which is widely and cheaply available) has made many navigation techniques largely redundant and that loss of control has emerged as a significant cause of accidents worldwide, there is demonstrably a need for review.
- A recommended program of training which meets the needs of the end user rather than the training institution.
- Credits given for modern high fidelity simulation in ab-initio training.
- Relevance of training course content to modern transport aircraft operation.
- Provision of access to funding for suitable individuals to undertake training, with a defined career path which will allow sensible repayment arrangements.

These matters can only be addressed through a comprehensive and thorough review undertaken by the airlines, the training industry and the CASA. Good preliminary work facilitated by Stephen Phillips was undertaken in 2008 and 2009 by the Future Pilot Task Force. The CASA Flight Training Panel has also been actively working to improve the current system with a number of initiatives that have been implemented and a number that are in the pipeline.

Care must be exercised to establish a Review Panel that is made up of individuals who have expertise but without individual vested interest in the outcome. The review should be established in close collaboration with the airlines and the CASA Flight Training Panel. It is important that suitable scope, framework and clear objectives for this Review Panel are defined.

In summary, an effective way of proceeding is as follows.

1. A Flight Training Review Panel be convened comprising suitable members from the airline industry, CASA and existing flying training experts. This Panel should

be convened and serviced by the relevant Commonwealth Department (Transport).

2. The Panel determines (from airline input) what is needed from the training system in terms of the skill, knowledge and personal attributes of the pilots the airlines need to recruit.
3. The Panel devises a syllabus and schedule of training to meet the defined requirements, and selection criteria are devised to enable trainees with a high probability of success to be identified.
4. Training providers who meet specified criteria are accredited to provide airline standard training by the Panel. The accreditation process must involve initial and ongoing audit by suitably qualified and experienced practitioners.
5. A suitable funding mechanism be devised so that the most suitable people are able to enter the training system.

2. Funding of Training Schemes

Flying training in Australia is (quite properly) regulated by CASA, who accredit organisations to deliver flying training, including the delivery of the Commercial Pilot Licence and Flight Instructor ratings. It is our view that the overlaid imposition of the Australian Qualifications Framework (AQF) in aviation training is neither practical nor effective. An example of this is that a CASA approved Flying Instructor also needs to do a Cert IV in Assessment and Workplace Training to instruct within the AQF, despite the CASA syllabus containing necessary and sufficient material for both training and assessment. The Cert IV is thus irrelevant.

We recommend that pilots holding a Flight Instructor Rating (FIR) issued by CASA and working for a CASA approved organisation be able to exercise the rights awarded by that certification without the need for any AQF qualifications.

We further submit that Australian students (who meet specified criteria) undertaking a full-time integrated Commercial Pilot Licence (CPL), Flight Instructor Rating (FIR) and Command Instrument Rating (CIR) from a CASA certified Air Operator be automatically eligible for Fee-Help for their CPL, CIR and FIR flying training without the need for AQF enrolment. The specified criteria should be developed to ensure that students have the necessary attributes for likely successful completion of the training.

In this way Fee-Help would be available to all students undertaking full-time training delivered by CASA Certified AOC holders, regardless of the AQF framework. This would provide equity across the training industry and eliminate the complex and artificial arrangements whereby flying fees are filtered through some

organisations to other organisations solely to allow the access to Fee-Help for limited (privileged) sectors of trainees only.

3. Aviation Safety Regulations

Senator Mark Bishop questioned the completion date of the program to rewrite Australia's aviation regulations (Civil Aviation Regulations 1988 to Civil Aviation Safety Regulations 1998) on 14 February, 2005, and was given an indefinite answer by the then CASA CEO Mr Bruce Byron. To date, the process remains incomplete, and is also producing voluminous regulations (several times the number of pages compared to the analogous US legislation) and of such fine detail that even lawyers will debate what the regulations mean. This complexity unnecessarily compromises safety as core aviation operational staff may well focus on the shades of legal meaning to satisfy the letter of the law at the expense of managing the substance of safety, and further introduces the need for expensive ongoing legal advice for all air operators. We submit that the present regulatory reform process is unsatisfactory and that the proposed and existing CASRs are too complex. We recommend therefore that consideration be given to undertaking an independent review with the objective of determining how to achieve the writing of a satisfactory set of aviation regulations in a timely manner.

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