

ATTRACTING AND INFORMING THE NEXT GENERATION OF AVIATION PROFESSIONALS:

THE ONLINE 'FUNDAMENTALS OF THE AIR TRANSPORT SYSTEM' COURSE



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THE NEXT GENERATION OF AVIATION PROFESSIONALS (NGAP)

International aviation represents a massive and complex industry that is crucial to our global economy and way of life. A diverse group of professionals, working in a variety of jobs, make up the rich fabric of aviation.

In recent years, various personnel forecasts have been produced with striking similarities: the projected growth of air traffic will require a steady stream of competent young professionals to enter the aviation industry, one that will probably exceed the capacity of the current global training pipeline.

When ICAO's General Assembly designated the Next Generation of Aviation Professionals (NGAP) programme as a Global Priority in 2016, they sent a clear signal to the industry that to meet future demands we need to explore and invest in methods to recruit and retain the next generation today.

ATTRITION: AN ONGOING CHALLENGE

We have an established global training network that does an excellent job of efficiently and safely guiding young people along their transition into professional roles. Although several training methodologies, instructional design strategies, and technologies support this process (and are a topic for discussion in themselves) a crucial side issue is rarely discussed: attrition. Within aviation education programmes, it is not unusual to have an attrition rate higher than 50%. This means that more than half of the young people who choose an aviation programme do not successfully complete the programme requirements – perhaps for lack of financial resources or due to difficulties learning the material.

Attrition also occurs after training is complete, when young people get their first experiences of aviation careers and decide that they aren't well suited to the lifestyle or logistics of that role. All too often, when young professionals choose not to complete or continue with their first career choice, they leave the aviation industry entirely to explore other opportunities (rather than seeking another role within the aviation sector).

Gone are the days when we can be satisfied with this status quo. To support the future growth of the industry, we must support every learner who has the



TOPICS COVERED IN THE FUNDAMENTALS OF THE AIR TRANSPORT SYSTEM COURSE

capacity to achieve competence, so they can find their place within aviation. This may mean suggesting an alternative occupation which they might not have previously considered.

TRADITIONAL TRAINING PROCESS

It's helpful to pause for a moment and reflect upon how training is traditionally conducted within the aviation industry. In general, we teach young people to become competent in a specific profession within a specific country. Consider that we train someone to be a pilot in Singapore, an air traffic control officer in China, or a maintenance engineer in Australia, among many other possibilities. For most professionals, several years of job-specific education are completed before one earns the privilege to enter an operational role. Once in that role, they often expand their horizons to learn how their profession is conducted differently in other countries thereby developing a rich understanding of other professions in the aviation industry.

With the growth projected in aviation, a challenge with the traditional approach will be that the career path of the next generation of aviation professionals may be very different from their predecessors. They may accept job opportunities in foreign countries and perhaps even experience moves between several different job roles.

To maximize retention within our industry, we need to rethink the traditional methods of early aviation education so that young people can make informed career choices (earlier) that best align with their interests and ambitions.

Rather than ab initio training with a narrow focus (on a specific profession within a specific country) that grows to a broad understanding after NGAPs enter the workplace, it is possible to flip this traditional approach and make a young person's first introduction to aviation education a broad international perspective on all of the interconnected professional groups. This approach could provide a foundation of industry awareness

to help the next generation make an informed professional choice as they embark on their education, and support retention of talented young people within the aviation industry (so they know there are a range of careers within the sector).

FUNDAMENTALS OF THE AIR TRANSPORT SYSTEM

This goal presents an enormous logistical challenge! How can we teach the next generation of aviation professionals, distributed around the world, about international aviation? Taking on this challenge, ICAO partnered with the University of Waterloo on the 'Fundamentals of the Air Transport System' (FATS) eLearning course. FATS is an asynchronous course (meaning without a direct connection between the learner and the instructor) which allows for the course to be completed by anyone around the world who has an interest in aviation.

The course contains nine modules that cover the following topics: 1) air law; 2) aircraft; 3) operations; 4) navigation; 5) airports; 6) security; 7) environment; 8) accidents; and 9) safety. Each narrated module ranges between 45 and 90 minutes in duration, profiling aviation professionals who work within that sector. Modules incorporate a variety of media, using a combination of imagery, videos, and interactive cases, to allow learners to explore sector-related challenges and opportunities. Each module concludes with a review quiz, targeting the key learning objectives and allowing learners to test their understanding.

SUPPORTING A SUSTAINABLE FUTURE IN AVIATION

To support the sustainable development goals (SDGs) of 'quality education' and 'reduced inequalities', the online delivery of the course will allow access to anyone with an internet connection around the world. Perhaps the most exciting aspect of this course is that it will be offered for **free** – all of the educational content will be available at no cost. This ensures that young people, who might not have the resources to pay for training, have an opportunity to engage with the aviation industry and explore professional



opportunities. For those who choose, a USD100 fee can be paid to access the final exam in the course. When learners achieve a passing score on the exam, they will be electronically issued an ICAO/University of Waterloo certificate, as a credential to begin building their professional portfolio.

CONCLUSION

The Fundamentals of the Air Transport System (FATS) course will be available on the ICAO website in late 2017. This course will be a tool that young professionals can use to find the aviation career that is best aligned with their interests and ambitions – while also serving as a resource to adults who are transitioning into the aviation industry from other sectors, and current aviation professionals who desire to learn more about how aviation works internationally. ■

✈ On 8 November 2017, ICAO's Secretary General, Dr. Fang Liu (centre left) and the President of the University of Waterloo, Dr. Feridun Hamdullahpur, signed a Memorandum of Understanding (MoU) in support of a new joint educational programme. Pictured with Dr. Liu is Mr. Meshesha Belayneh (far left) ICAO's Deputy Director in its Technical Cooperation Bureau and the Chief of its Global Aviation Training Office, while President Hamdullahpur is accompanied by Dr. Jean Andrey (right), the Dean of the school's Faculty of Environment.

The first initiative under the new agreement is the launch of an eLearning course at the ICAO Next Generation of Aviation Professionals (NGAP) Global Summit, on the Fundamentals of the Air Transport System.

Stressing the importance of making more and more young people aware of the diverse career opportunities in air transport globally, especially in light of forecast sectoral growth, Secretary General Liu emphasized that the new partnership represents an important additional step toward addressing future shortages of highly-skilled aviation personnel. ■

ICAO AND THE UNIVERSITY OF WATERLOO LAUNCH THE NEW eLEARNING COURSE

