

AEROSPACE INFORMATION REPORT

AIR6319™

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ATP360 An Air Carrier First Officer Training Program

RATIONALE

The correlation between initial airline applicant flight hours (experience) and both training and initial line performance has been found to be weak. Current new-hire failure rates are reported to be at historically high levels. A solution is improved, industry and career-specific training, followed by mentoring. The intent of ATP360 is to build on varied pilot applicant experience by providing effective air carrier training.

FOREWORD

Congressional and Federal Aviation Administration actions in 2013 have raised the career entry threshold for professional airline pilots. Formerly, a commercial and instrument certificate with multi-engine rating (250 hours) were sufficient to start an air carrier career as a First Officer. Now, an ATP certificate is required. Either 1500 total hours or, with certain educational requirements, 1000 hours are necessary for a "restricted" ATP certificate for new First Officers. Neither requirement provides sufficient or desirable experience and competence in many skills required for adequate air carrier pilot performance. Specifically, targeted competencies have been identified by ICAO and other industry groups. Design work begun in 2014 and modified by feedback from industry training experts resulted in the training design called ATP360. The training design is introduced in this Aerospace Information Report.

While the AIR does not address current regulatory requirements for experience (hours), the program clearly offers an alternative air carrier preparation program, as mentioned in the first sentence of the rationale. In a different regulatory environment, the program offers realistic training towards air carrier competencies, and mental skills not required by current regulatory provisions.

1. SCOPE

ATP360 air carrier training applies to pilots holding a commercial certificate with instrument and multi-engine ratings. This document describes how the ATP360 program achieves its objectives: to educate and train qualified pilots for First Officer and eventually Captain positions with the regional and/or the major airlines. This document also provides an overview of a selection process, an academic curriculum, a flight training program, faculty preparation, and program evaluation. The focus of ATP360 is to develop industry-recognized competencies and instill the knowledge, skills and attitudes required to bring persons up to professional air carrier standards.

1.1 Purpose

The purpose of this document is to inform the public and the industry of an effective design from industry experts in the air carrier, general aviation and government sectors.

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2. REFERENCES

2.1 Applicable Documents

The following publications form a part of this document to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order. In the event of conflict between the text of this document and references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

2.1.1 ICAO Publications

Available from International Civil Aviation Organization, 999 University Street, Montreal, Quebec H3C 5H7, Canada, Tel: +1 514-954-8219, <http://www.icao.int/>.

2.1.1.1 ICAO Doc 9868 Procedures for Air Navigation Services - Training (PANS-TRG)

2.1.1.2 ICAO Doc 9995 Manual of Evidence-based Training

2.1.2 FAA Regulations and Publications

2.1.2.1 14CFR 61.160, Aeronautical Experience-airplane category

2.1.2.2 14CFR 121.403 Curriculum Requirements for Air Carriers

2.1.2.3 14CFR 121.405(d) Instructor Training Requirements

2.1.2.4 FAA-AC-61-138 Airline Transport Pilot Certificate Training Program

2.1.3 IATA Publications

Available from International Air Transport Association, Publications Assistant, 800 Place Victoria, P.O. Box 113, Montreal, Quebec H4Z 1M1, Canada, Tel: 1-514-874-0202, www.iata.org.

2.1.3.1 Guidance Material and Best Practices for Pilot Aptitude Testing, March 2012

2.1.3.2 Evidence-based Training Implementation Guide, July 2013 (co-issued as IATA, IFALPA, ICAO)

2.1.4 Royal Aeronautical Society Documents

2.1.4.1 The Human Element in Airline Training, a specialist paper, RAes Flight Operations Group, April 2003

2.1.4.2 The Impact of Flight Simulation in Aerospace, a discussion paper by RAes, March 2009

2.2 DEFINITIONS

2.2.1 ABILITY

Competence in doing.

2.2.2 ACADEMIC TRAINING

All programmed and organized training that is provided in classroom or online, or computer-based formats that provide requisite knowledge for proper thinking, decision making, or task performance (e.g., ground school; online learning course provided by a school or academy).

2.2.3 AVERAGE

Not error free; containing a typical level of inaccuracy or lacking a high level of precision; yet satisfactory in all essential elements.

2.2.4 ABOVE AVERAGE

Worthy of reinforcement and encouragement.

2.2.5 BELOW AVERAGE

Corrections and additional learning required.

2.2.6 COGNITIVE ENGINEERING

A multidisciplinary endeavor concerned with the analysis, design, and evaluation of complex systems of people and technology, which combines knowledge and experience from cognitive science, human factors, human-computer interaction design, and systems engineering.

2.2.7 COGNITIVE ERGONOMICS

Cognitive ergonomics, defined by the [International Ergonomics Association](#) "is concerned with mental processes, such as perception, memory, reasoning, and motor response, as they affect interactions among humans and other elements of a system. The relevant topics include mental workload, decision-making, skilled performance, human-computer interaction, human reliability, work stress and training as these may relate to human-system design." Cognitive ergonomics studies cognition in work and operational settings, in order to optimize human well-being and system performance. It is a subset of the larger field of [human factors and ergonomics](#).

2.2.8 COMMUNICATION SATURATION

The limit (under current circumstances) that an individual can receive and assign meaning and significance to messages, symbols, sounds.

2.2.9 COMPETENCY

State of being capable of a performance; ICAO: One of the IATA/ICAO defined pilot general abilities, e.g., workload management ICAO definition: the combination of skill, knowledge, and attitude to achieve a pre-determined goal.

2.2.10 CURRICULUM

An organized series of related studies, leading to a level of knowledge or competence.

2.2.11 DECISION-MAKING PROCESS

The thought process that determines, evaluates, and selects alternative courses of action.

2.2.12 EVIDENCE-BASED TRAINING

A training methodology that relies heavily on continuous assessment of student progress as critical in the selection of training content and methods.

2.2.13 EXCELLENT

Very good of its kind.