Federal Aviation Administration
Flight Standards Service

Air Carrier Training Aviation Rulemaking Committee (ACT ARC)

ACT ARC Recommendation Recommendation 18-4:
Continuous Improvement of Standardized Curricula

I. Submission
The recommendations below were submitted by the Air Carrier & Contract Training Workgroup (AC&CT WG)1 for consideration by the Air Carrier Training Aviation Rulemaking Committee (ACT ARC) Steering Committee at F2F-17. The ACT ARC Steering Committee adopted the recommendations with unanimous consent, and they are submitted to the Federal Aviation Administration as ACT ARC Recommendation 18-4.

II. Statement of the Issue
In previous recommendations submitted to the FAA, the ACT ARC recommended the establishment of an aircraft-specific standardized curriculum model for part 135 training provided by part 142 training centers. The standardized curriculum model would include a feedback loop that allows part 135 operators, part 142 training centers, manufacturers, and the FAA to partner and systematically collect meaningful data. The data would be used to continually review and improve standardized curricula and to enhance the quality of training provided. In addition, the ACT ARC recommended the FAA develop guidance for FAA personnel and industry stakeholders (part 135 operators, part 142 training centers, and manufacturers) under the aircraft-specific part 135 standardized curriculum model to ensure a quality assurance process is used to integrate meaningful data collection, audit, and validation processes (consistent with safety management system principles and industry best practices) to ensure feedback and continuous improvement of training provided under each standardized curriculum.[2]

The ACT ARC Steering Committee tasked the AC&CT WG to provide supplemental proposed recommendations on data collection methodology to validate and continuously improve standardized curricula. The supplemental recommendations are intended to advise the FAA in its development of guidance to implement the Standardized Curriculum Concept.

III. & IV. Recommendations & Rationale
The ACT ARC recommends the following:

Recommendation 18-4:
The ACT ARC recommends the FAA, in partnership with industry, establish a data collection methodology for the validation and continuous improvement of standardized curricula that ensures information collected is protected and effective for its intended purpose.

Rationale:
In previous recommendations submitted to the FAA, the ACT ARC proposed that aircraft-specific standardized curricula for part 135 training delivered by part 142 training centers be guided by a team of experts, known as the Training Standardization Board (TSB). The ACT ARC recommended that the FAA establish the TSB as a standing, permanent body consisting of a high-level TSB (referred to as "the Board") with subordinate Actions Teams. The Board would include representatives from part 142 training centers, part 135 operators, manufacturers, and the FAA. Action Team members would be subject matter experts (SME) on aircraft and training at the

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[1] The AC&CT WG is comprised of ACT ARC Steering Committee Members including part 135 operators, part 142 training centers, and membership organizations/industry associations.
[2] ACT ARC Recommendation 15-9, Aircraft-Specific Part 135 Standardized Curriculum Model.

working level.[3] The TSB would be responsible not only for developing the standardized curriculum for a particular aircraft, but also for continuous improvement of the curriculum based on information provided by training centers, operators, and the FAA.[4]

Since the TSB maintains responsibility for the continuous improvement of standardized curricula, it would be the end user of data or information collected from training centers or operators. The ACT ARC recognizes there may be legal and data protection concerns that accompany any information collection. Therefore, the ACT ARC recommends that information be de-identified by the training center or operator before it is provided to the TSB. FAA guidance should provide clarity to oversight personnel about limitations on using information certificate holders provide to the TSB.

Training centers, operators, and manufacturers would provide information to support the continuous improvement of standardized curricula in regular reports to the TSB. The TSB would establish common formats, content requirements, and frequency for the reports. The format for the information collection must be efficient and common across contributors. As previously recommended, the standardized curriculum would have a common grading scale to allow for the analysis of pilot performance across training centers. Because the analysis of safety information to continuously improve standardized curricula is critical to the success of the concept, it is important that information collection is not technologically burdensome. The platform used for the collecting data should be flexible in order to adapt to a constantly evolving information technology.

The TSB would determine what information should be collected from training centers, operators, and/or manufacturers to support continuous improvement of the standardized curriculum. The type of information collected falls into two categories: 1) Information for operational/curriculum improvements. 2) Safety-related emphasis items. The high-level TSB would develop a list of 6-10 "core" questions (that apply to all aircraft) designed to gather information used to improve the curriculum. This standard set of core questions would be incorporated into the Standardized Curriculum Requirements Document (SCRD) for every aircraft.[5] Action Teams (subject matter experts on a particular aircraft) could add to the core questions in order to request additional aircraft or curriculum-specific information. The core questions and any additional aircraft-specific questions created by the Action Team would be known to all stakeholders because the questions would be included in the SCRD for the aircraft.

Examples of potential questions include:

Training Center Questions:
- What were the top three areas for difficulty during training?
- What is the training center's assessment of the reason for training difficulties for the top three areas?
- Which items received the lowest grades (in the system)?
- What was the collective/aggregate performance on specific maneuvers?

Operator Questions:
- What were the top three areas of deficiencies during line checks? Did voluntary safety programs (i.e., LOSA SMS, FOQA, ASAP, ASRS) reveal any risks or trends?

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[3] ACT ARC Recommendation 17-7, Training Standardization Board Structure and Functionality. This recommendation is based on the premise that the TSB structure and function will be impacted by the legal authority under which the FAA establishes the TSB (i.e., Advisory Committee).

[4] ACT ARC Recommendation 16-1, Scenario-Enhanced Recurrent (SER) Training and Checking for 135 Operators.

[5] Under the Standardized Curriculum Concept, a Standardized Curriculum Requirements Document (SCRD) defines the curriculum requirements for a particular aircraft or series of aircraft.

The FAA would also provide critical information to the TSB. The FAA would analyze information inputs (NTSB recommendations, FAA safety recommendations, voluntary program data) for risks that may need to be addressed within the standardized curriculum. The collective information provided to the TSB by the FAA, training centers, and operators would be analyzed by Action Teams (subordinate to the TSB) to identify any improvements to the respective standardized curriculum. All curriculum changes would be approved by the TSB.

The key purpose of the information collection is to identify weaknesses in the curriculum and to validate that standardized curricula are being presented consistently across training centers. In the current contract training environment, training centers may not witness where training lags behind certain needs. Conversely, training may spend too much time on certain items. Feedback associated with the standardized curriculum will increase training center's ability to make adjustments based on operator information.

It is important that those stakeholders providing information and data to the TSB see this information being utilized by the TSB in a timely and effective manner. Therefore, it is important that TSB representation includes the necessary participants to change the curriculum (Original Equipment Manufacturers are essential). Also, it is critical that any safety-related concerns are addressed within the curriculum in a timely manner. Data collection associated with the standardized curriculum should not create new burden. Rather, it should leverage the information stakeholders already maintain and feed it to a central point (the TSB) where it can affect positive change.

The information feedback loop associated with the standardized curriculum is an important step toward greater use of data analysis to identify risks within part 135 operations. The WG expects that use of data analysis to continuously improve the standardized curriculum will mature after the concept is implemented and well established.

V. Background Information

AC&CT WG Scope of Work:
These recommendations supplement previous recommendations (ACT ARC Recommendations 15-9, 16-1, and 17-1) and partially address the following component of the AC&CT WG Scope of Work, which is to consider strategies to improve 135 operator training and checking, including training/checking conducted by 142 training centers.

ACT ARC Initiatives:
These recommendations supplement previous recommendations (ACT ARC Recommendations 15-9, 16-1, and 17-7) and partially address Initiative #9.3 and the Long Term Action component of Steering Committee Initiative #33:

- Initiative #9.3: Establish a Workgroup to make recommendations about the relationship between training centers and air carriers in order to achieve standardization (where appropriate) in the following areas:

    - 9.1 Check Airman Qualification

    - 9.2 Flight Instructor Qualification

    - 9.3 Air Carrier Training Curriculums delivered by Part 142 Training Centers

- Initiative #33: Short Term Action—Instructor/Evaluator Training Long Term Action—Consider methods to use data collected under the Aircraft-Specific 135 Standardized

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Curriculum model to incorporate innovative risk mitigation training techniques to continually improve the curriculum.