



WORKING PAPER

ASSEMBLY — 38TH SESSION

TECHNICAL COMMISSION

Agenda Item 38: Other issues to be considered by the Technical Commission

**PROPOSAL TO IMPLEMENT AN EFFECTIVE SYSTEM FOR MEASUREMENT OF
AND FEEDBACK ON THE IMPACT OF TRAINING DELIVERED
USING THE TRAINAIR PLUS METHODOLOGY**

(Presented by the Dominican Republic)

EXECUTIVE SUMMARY

The Higher Academy of Aeronautical Sciences of the Dominican Republic (ASCA) has gained extensive experience in training delivery using the TRAINAIR PLUS methodology, and confirmed its effectiveness. However, for the review and update of contents and resources, and because all actions must be measured in a performance based system, the need has arisen for feedback on how participants apply the skills acquired. This paper proposes a mechanism to collect this valuable information and make it available to training programme designers and other States so as to optimize courses and make more efficient use of organizational resources.

Action: The Assembly is invited to:

- a) discuss the information contained in this working paper;
- b) support the incorporation in the TRAINAIR PLUS Programme of a system for measuring the impact of training at the job level and the organization level;
- c) support the introduction of training impact reports as a responsibility for States implementing the Standardized Training Packages (STPs); and
- d) consider extending such an improvement to conventional courses designed in the training centres.

<i>Strategic Objectives:</i>	This working paper relates to the Safety Strategic Objective.
<i>Financial implications:</i>	None identified.
<i>References:</i>	Doc 9941, <i>Training Development Guide – Competency-based Training Methodology</i> DDC TRAINAIR ASCA

1. INTRODUCTION

1.1 Training is an important component in any system. It is a means for personal improvement that clearly benefits an organization by refining staff competencies and heightening their ability to resolve complex situations and take the right decisions for the good of the organization, its customers and its owners, among others.

1.2 Nevertheless, the ultimate goal is not training, but rather the verification of positive changes in the areas of work. Such changes might be identified through improved execution of activities, better quality products, a greater commitment on the part of personnel, etc. It is therefore very important to measure and document the impact of training, since this is the ultimate assessment of attainment of the goals in any organization that invests in skills acquisition and updating for its staff.

1.3 Measuring the impact of training at the different levels of an organization is important, the objective being to make the training more efficient and save considerable amounts of time and financial and technical resources, and also to enhance the professional level of staff. There are many different measuring tools to choose from: post-training performance measurement, the establishment of metrics for the desired training outcomes, customer satisfaction considerations or improvements to the product offered, to name a few.

1.4 The ICAO TRAINAIR *PLUS* Programme now allows for the measurement of the impact of training. However, States have provided few records of post-standardized training outcomes.

1.5 This is a significant shortcoming given the fact that every civil aviation authority and industry employer expects training to yield effective results, and effectiveness cannot be guaranteed if it is not measured and evaluated. The trend toward performance based systems means that organizations must weigh all the parameters that may help to ensure safety and full resource optimization.

2. BACKGROUND

2.1 ICAO plays an important role in making sure that all of the civil aviation community has access to the standardized training and qualified professionals needed to secure the safe and sustainable development of air transport. Programmes such as TRAINAIR *PLUS* have been key to achieving this end.

2.2 With global implementation of the TRAINAIR Programme and the subsequent adjustments and upgrades of the TRAINAIR *PLUS* Programme, the International Civil Aviation Organization has positively influenced the instruction of the next generation of aviation professionals.

2.3 The underlying methodology of the TRAINAIR *PLUS* Programme means that course development is the result of job analysis, where the knowledge, skills and attitudes necessary for good performance on the job are identified. This opens the way for a system that can measure the impact of training.

2.4 Evaluation of the impact of the TRAINAIR *PLUS* Programme consists of an evaluation plan presented in the development phase. Subsequent steps are for the management.

2.5 Since 2009, the Higher Academy of Aeronautical Sciences has been developing and delivering courses using the TRAINAIR methodology and, as of 2011, the TRAINAIR *PLUS* methodology. Based on this experience, we believe it is important to take account of the impact of training beyond the classroom, and for the reports to provide input for planning by both the training centre and organization management.

3. DISCUSSION

3.1 Staff training incurs a number of costs such as the cost of the necessary resources for preparing and delivering training courses, the costs to organizations of travel and lodging for participants, and the cost of taking staff away from their work during training.

3.2 To justify these costs, administrators should feel certain that the training they provide, or the courses attended by their staff, will be a significant factor in their performance. They need to know that their employees have not only attained new knowledge, skills and attitudes in the course of their training, but that they will be able to apply those attainments when they go back to work.

3.3 The implementation and maintenance of safety management systems in the various entities of the aeronautical industry require sufficient numbers of well-trained people and respect for the established procedures and regulations. It is for this reason that mastery of the skills learned in training should be a variable that can be measured and verified in terms organizational impact.

3.4 Measurements should be enhanced to include data gathered on the following:

- a) the behaviour or conduct of the trainee, i.e., the 'use', 'transfer' or 'incorporation' of what was learned on the course; and
- b) the 'results', or obvious differences observed upon return to work.

3.5 Measurements that verify the transfer of knowledge, skills and attitudes attained by training course participants and application of those attainments on the job may be obtained through surveys of the participants themselves and their section managers. Documentary inspection may also serve to corroborate trainee performance, for example, performance reviews, spot check reports and reports on workplace incidents.

3.6 The impact of training in an organization may be measured by analysing such operational metrics as a reduced error rate and increased levels of satisfaction.

3.7 The introduction in an organization of a quality control system comprising management indicators that reflect the performance of each and every operational process and activity involving all personnel would be an excellent source of statistical data for an accurate measurement of the impact of training centre offerings. It would also demonstrate organizational growth as a result of the training process.

4. **RECOMMENDED ACTION**

4.1 The Assembly is invited to:

- a) support the proposal to incorporate in the TRAINAIR *PLUS* methodology actions to measure the impact of training ex post at the level of individual jobs and throughout the organization;
- b) support the proposal to incorporate in the TRAINAIR *PLUS* methodology the commitment to submit statistical data on the impact of Standardized Training Packages delivered, to be placed in the TRAINAIR *PLUS* Virtual Library where they may accessed by any programme participant wishing to have details on the impact of the training; and
- c) consider extending this type of improvement to conventional courses developed in the training centres in view of the positive contribution to achieving safety targets.

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