UDC 656.7.071.13(045)

[1]**Alexander Luppo,** Assoc. Prof.
[2]**Veronika Rudnenko,** student

COMPETENCE ASSESSMENT OF AIR TRAFFIC CONTROL PERSONNEL

National Aviation University
[1]E-mail: luppo-ae@mail.ru
[2]E-mail: veronica_rudnenko@ukr.net

Abstract. *The article deals with the main principles of competence assessment of Air Traffic Control personnel, including performance objectives and methods of assessment.*

Keywords: air traffic safety, competence assessment, confirmation of competence, performance objectives.

Introduction

A competence assessment is established with the aim to ensure that personnel and organizations are responsible for air traffic services support and tasks, which are directly connected with aviation safety, are competent in carrying out those tasks. Corresponding regulations and procedures clearly describe the process of assessment. The main purpose of competence assessment is to confirm the necessary level of competence or to identify areas in need of improvement for individual or for the system within which the individual operates. Competence assessment also provides support for the individual and the system. It must be measured against performance objectives. General requirements for all air traffic services personnel are responsible for safety related tasks which are included in European Safety Regulation Requirements 5 (ESARR 5) [1; 2]. They concern such personnel as Air Traffic Controllers (ATCOs), On-the-Job Training Instructors (OJTIs), Competence Assessors and Local Competence Assessors. According to these requirements:

− air traffic controllers must be assessed during their continuous competence;

− the Designated Authority are informed by Air Traffic Services (ATS) provider when an OJTI is no longer competent in training provision;

− the Designated Authority approves Competence Assessors to conduct examinations.

A competence assessment is also a means for reinforcement of safety culture. As every person achieves safety objectives in different ways, competence assessment unifies application of air traffic control procedures throughout the Unit and helps to solve operational problems with the use of "best practices" techniques.

A competence assessment process requires gathering information by direct observation, which can be supplemented by other reference material such as theoretical checks, training records and discussions. So the personnel is responsible for assessment process, so-called competence assessors, are selected on the basis of their experience. He also must have well-developed interpersonal and communication skills. New assessors are required to be assessed by experienced assessors before they could conduct assessment individually and unsupervised.

Competence may be assessed by a system of:

− continuous assessment;

− dedicated assessment;

− combination of continuous and dedicated assessment;

− oral, written and/or computer-based examination.

Continuous assessment is conducted by observing standards of air traffic control service provided by person is being assessed.

Dedicated assessment requires assessor to sit with the controller and observe the standard and quality of work is being done.

Oral examination is usually carried out after the practical stage of assessment.

Written examination is provided by multi-questioning.

Competence Assessor must record all his observation during the process of assessment. These notes must be short and informal.

At the end of the assessment two types of results are available for the controller; these are 'competent' or 'non-competent'.

Performance objectives for controllers

The main task of the ATCO is to provide safe, ordered and efficient flow of traffic. But, as it was told previously, they achieve operational objectives in different ways. This fact makes the process of assessment more difficult.

To limit the subjectivity of assessment, key performances are introduced [3; 4].

During the process of competence assessment simple checklist may be used to assist the assessor. It must be noted, that the presence of checklist should not distract the competence assessor from the primary task of observation. The checklist usually is completed before the formal debriefing. The Competence Assessor may use this checklist while conducting a report. The key element of any assessment is that the person is being assessed has a clear understanding of objectives against which he is being assessed.

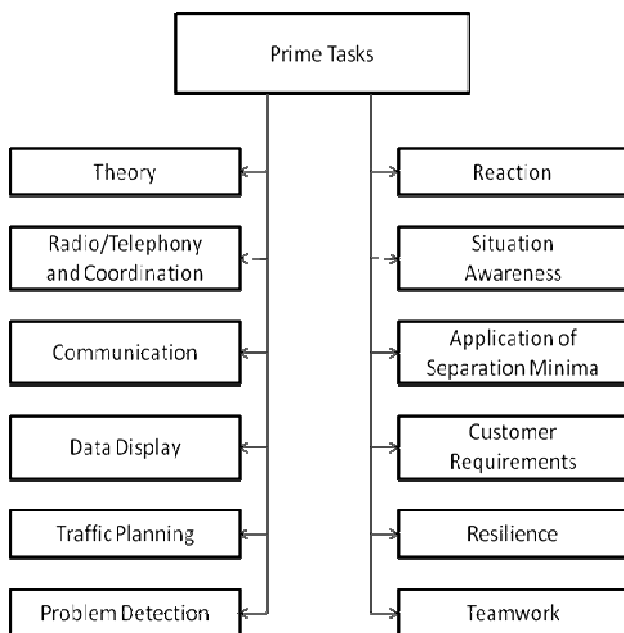On the fig. 1 prime tasks are shown which must be completed during the competence assessment of the ATCO.

Fig. 1. Prime tasks at ATCO competence assessment

Performance objectives for On-the-Job Training Instructors

OJTI plays an important role in the competence assessment of the students/trainees controllers. Some OJTIs even forget the fact that students are in the process of development and they can make mistakes.

That's why similar problems must be solved with respect and professionalism, providing feedback during formal debriefings and briefings. It will help the OJTI to ensure that self-esteem of the student/trainee is maintained [3]. The manifestation of the aggression or any form of hostility is strictly unacceptable and is considered as unprofessional behavior.

Air Navigation Service Providers are responsible for provision of assistance for OJTIs in conducting their operational objectives. These responsibilities are:

− development of Unit Training Plan;

− establishment of a competence assessment scheme;

− provision with frequent feedback;

− provision with facilities for qualifying training.

The competence assessment of the OJTIs should be the basis for the renewal of the license endorsement.

There are also some additional means of confirming OJTIs competence. This concerns students/trainees who have an opportunity to provide feedback on the on-going OJTI's performance (during the period of the On-the-Job Training).

At the end of the training every student/trainee controller should be asked closed questions relating performance of the OJTI who have been responsible for the training. The checklist identifies key tasks and relates the student/trainee controller. The questions have the closed form so that to avoid unsolicited opinion [4; 6].

After the formal assessment and the student/trainee controller questionnaire the strengths and drawbacks of the OJTI become apparent.

Repetitive comments of the students/trainees clearly indicate effectiveness or deficiencies of individual OJTI and after this the decision about the competence of the OJTI can be made.

On the basis of obtained results the decision is made about the necessity of the need for remedial training of the OJTI. OJTIs should have the opportunity to exercise the privileges of the OJTI license endorsement on a regular basis, but refresh training is conducted at least every 5 years [5].

On the fig. 2 the prime tasks for OJTI competence assessment are shown. Subtasks are introduced for wider description of the assessment process. At the end of the assessment the decision about the competence is made.

Performance objectives for Competence Assessors

Competence Assessors are specially trained personnel who are responsible for carrying out assessments or examinations to ensure that Air Traffic Control (ATC) staff is competent and meet the appropriate requirements [4; 6].

Generally they are responsible for the whole ATC personnel, who operate in routine and emergency situations. Therefore, the Designated Authority become sure of safety provision within the unit [5].

While approving the appointment of the competence assessor the set of supporting objectives is produced by the Designated Authority. These define the necessary training for the assessor and the requirements used for confirmation of their on-going competence.

According to this document competence assessor's roles can be divided into the simple competence assessor and local Competence Assessor. Both positions have different functions but it is not proposed that these are two separate statuses.

Competence Assessor is considered to be the designated and approved controller who is responsible for carrying out competence assessments and examinations with the aim to issue a license or competence certificate for a first time with the associated:

– rating endorsement/unit endorsement (in case of a student controller);

– new unit endorsement (in case of trainee controller);

– license endorsement (in case of OJTI).

Competence Assessor recommends the issue of a license with the corresponding ratings and endorsements for the first time and for additional unit endorsements. He is directly submitted to the Designated Authority.

To confirm a competence of an Assessor performance objectives must be developed. Also these are used for definition of required training for the Competence Assessor and verifying their on-going competence.

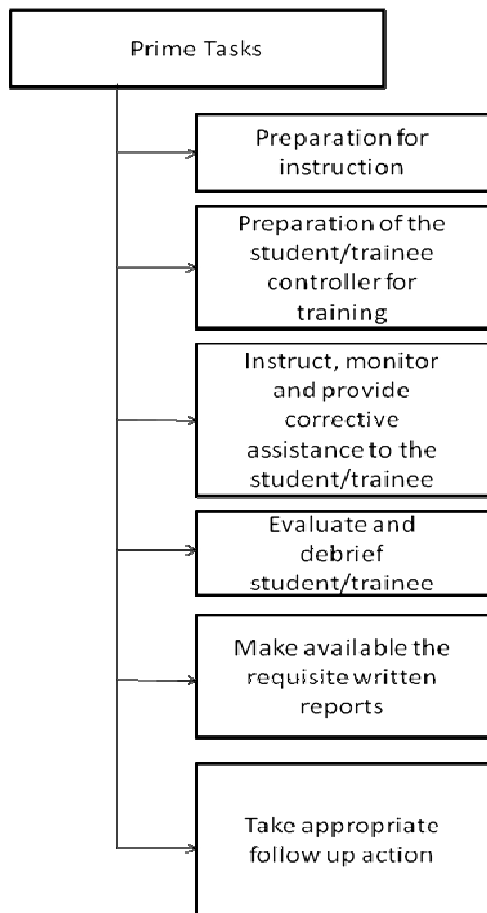On the fig. 3 the prime tasks for Competence Assessor's assessment are shown.

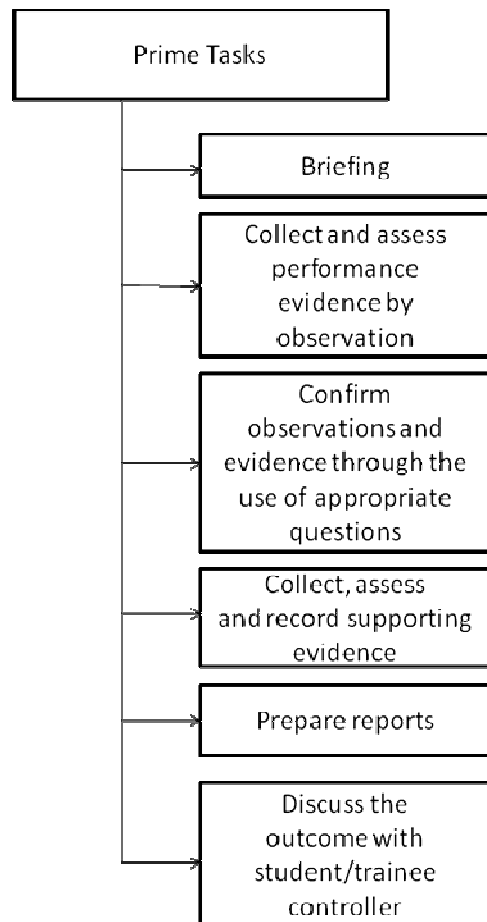Fig. 2. Prime tasks at OJTI competence assessment

Fig. 3. Prime tasks at Competence Assessor assessment

Additionally, subtasks for the assessment are introduced in order to describe more wide objectives which are obligatory for the competence assessment of the Competence Assessor. After each assessment general conclusions must be performed through which it can be known whether the assessor is competent or not in carrying out his professional tasks.

Performance objectives
for Local Competence Assessor

Local Competence Assessor is considered to be a specially trained controller who is responsible for confirming the maintenance of controllers' competence. Also the area of their responsibility is the confirmation that unit controllers are competent and remain competent in conducting their licensed tasks and objectives. As for the simple Competence Assessor the performance objectives of the assessment are also developed for the local Competence Assessor. These are used to provide the assessor with the necessary training program and to check whether the assessor is competent in carrying out his operational tasks. As the result the competence level is confirmed or denied.

On the fig. 4 the prime tasks for the assessment of the local Competence Assessor are introduced.
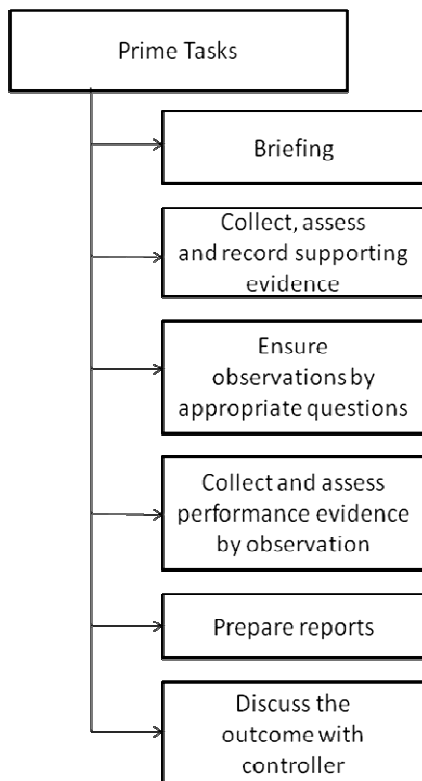

Fig. 4. Prime tasks at Local Competence Assessor assessment

Additionally, subtasks are established for wider description of the assessment process.

Conclusions

Competence assessment is of great importance for the provision of air traffic services, which are related to the aviation safety, through the whole European area. Through the assessment process the Designated Authority become sure that air traffic control personnel is qualified and competent in carrying out their operational tasks, taking into account not only air traffic controllers, but also OJTI and Competence Assessors, who are responsible for the training of students as future controllers and competence confirmation for the ATCOs.

Competence assessment is a real mean for improvement of safety culture in the ATS operational environment. It promotes uniformity for the application of the ATC procedures and encourages common schemes for solution of operational tasks by introduction of "best practices" techniques.

So, the process of competence assessment is the one of the most important elements in the ATS system, providing clear understanding of ATC personnel competence and making a great contribution into the safety of air traffic.

References

1. *Guidelines* for Competence Assessment 2.0, 16 March 2005.

2. *EUROCONTROL* Safety Regulation Commission (SRC) (2002). EUROCONTROL Safety Regulatory Requirements (ESARR). ESARR 5: ATM Services' Personnel. Edition 2.0 Released Issue. Brussels: EUROCONTROL.

3. *EATMP* Human Resources Team (2004) – L2. European Manual of Personnel Licensing - Air Traffic Controllers. HUM.ET1.ST08.10000-STD-01 Edition 2.0. Released Issue. Brussels: EUROCONTROL.

4. *EATM* Human Resources Team (2003a). Guidelines for Refresher Training for Air Traffic Controllers. HRS/TSP-004-GUI-04. Edition 1.0 Released Issue. Luxembourg: EUROCONTROL.

5. *EATM* Human Resources Team (2003c). Unusual/Emergency Situations Training. HRS/TSP-003-CBT-11. Edition 1.0 Released Issue (CD-ROM). Luxembourg: EUROCONTROL.

6. *EATMP* Human Resources Team (2001). European Manual of Personnel Licensing - Air Traffic Controllers: Guidance on Implementation. HUM.ET1.ST08.10000-GUI-01 Edition 1.0. Released Issue. Brussels: EUROCONTROL.