REPORT OF THE AIR TRAFFIC SERVICES COMPETENCY STUDY (ATSCS)

EXECUTIVE SUMMARY
APIRG Decision 19/18 established the Air Traffic Services Competency Study Group (ATSCSG) for the purposes of carrying out an analysis of the impact on aviation safety by the different methods of trainings offered by the many Aviation Training Organizations (ATOs) in the region.   The Study further sort to further the discussions on the different levels of competency of ATC personnel based on training, equipment and emerging workplace challenges across the AFI region following the COVID-19 pandemic. To enable this APRIG 24 recommended a continuation of the study with inclusion of any changes to competence needs that may have emerged due to the COVID 19 pandemic.   This report portrays the results of the survey carried out between 2017 and 2021

1. INTRODUCTION

1.1 APIRG/19 Decision 19/18 required the Establishment of the ATS Competencies Study Group to:

   a) Study the shortcomings in ATC training including States' (and ANSPs) training programmes and plans; and

   b) Establish and provide recommendations that would address issues relating to lack of competency of ATS personnel in the AFI region. *The TORs of the study group is provided as Appendix to this WP.*

1.2 First Meeting of the Air Traffic Services Competencies Study Group (ATSCSG/1) was held in Nairobi, Kenya, 22-23 July 2014. Meeting resolved to develop a survey tool to collect data on the above two objectives. However, in order to manage costs, time and other resources, visits were to be done to selected academies/schools/institutions in AFI States and detailed focus would be on the four institutions with low output/enrolment of ATM and AIM (including Message Handling) candidates, and four with the highest output. In addition, four ANSPs having the highest number of Unsatisfactory Condition Reports (UCRs)/ATS incident reports would be visited.

1.3 New challenges emerged later on maintenance of ATCO competence during reduced traffic volume as a result of COVID 19 travel restrictions. This necessitated a

review of the questionnaire to capture any emerging competence requirements.

1.4 Survey was rolled out for the second time in August 2021 and response obtained from 26 AFI States.

2. DISCUSSION

2.1 The ATS Competency study was initiated following reports from the AIAG and IFATCA that pointed to a need to evaluate level of ATCO competency being a probable causal factor to ATS related incidents.

2.2 SURVEY RESULTS

The Survey was rolled out in 2017 and a handful of responses obtained. These were not adequate to provide a representative number for analysis. The survey was resent in 2021 and results analysed based on the areas of focus as required in the study group TORs provided in the Appendix. The review of each of the areas and the outcome from the respondents is as follows:

a) *Aviation Training Academies, schools and institutions.*

The four regional institutions that contributed to the largest output of ATS training in Approach Control and Area/Enroute control were EAMAC(Niger), ATNS(SA), and EASA(K), with additional academies noted in Aerodrome training by TCATI (Tanzania), SENASA(Spain), Maputo and Sweden.

Type of training	Output in %					
	EAMAC	ATNS	EASA (K)	TCATI	SENASA	Others
Area control	35	32	9	8	8	8
Approach control	31	20	12	10	10	17
Aerodrome	33	23	16	10	9	9

b) *Abridging (conversion) training being provided by ANSPs*

55% of the respondents confirmed existence of an abridging program while 45% stated that there is no established abridging program by the ANSP.

c) *Type and quality of On-the-Job Training (OJT) being provided, covering both initial and in-service OJT as well as the level of Trainee supervision.*

Survey area	Implemented	Not implemented

Are there OJTIs?	87%	13%
Are the OJTIs formally trained?	100%	0
Are the OJTIs formally approved by the CAA?	63%	37%
Is the OJTI training program part of the ANSP training plan?	95%	5%
Are there guidelines for Trainee supervision?	84	16

### d) *Continued proficiency and recurrency training*

The Survey sought to establish whether States have a mechanism of ensuring continued proficiency. 91% of the respondents confirmed that they have in place a policy on continued proficiency. However, only 50% of those have implemented the policy.

The chart below illustrates the answering trends.
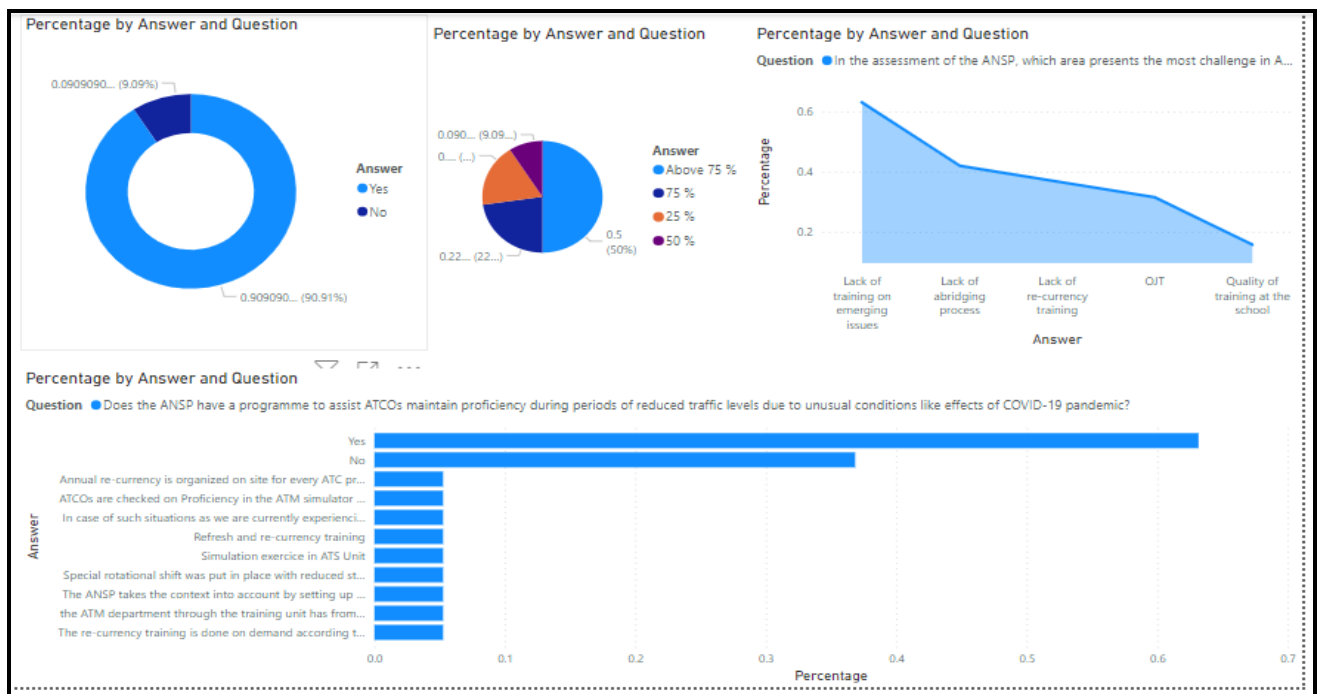
It also sought whether the states conduct recurrency training. Out of the states implementing continued proficiency, 83% confirmed to include recurrency training while 17% do not. We further sought to know at what stage one qualifies for recurrency training and the results were as follows:

✈ 68% Reported that one qualifies for recurrency training after 1 year, 22% after 3 years.

✈ 53% reported that the recurrency is conducted at the ATC unit with 47% of the respondents saying its conducted at the academy.

✈ 37% Reported that the recurrency is conducted by the ATC training department at the station, 37% reported its done by Academy trainers with only 27% reporting that its done by OJTIs

✈ During period of reduced traffic, 63% reported that they have a program for maintaining proficiency while 37% reported the do not have one.
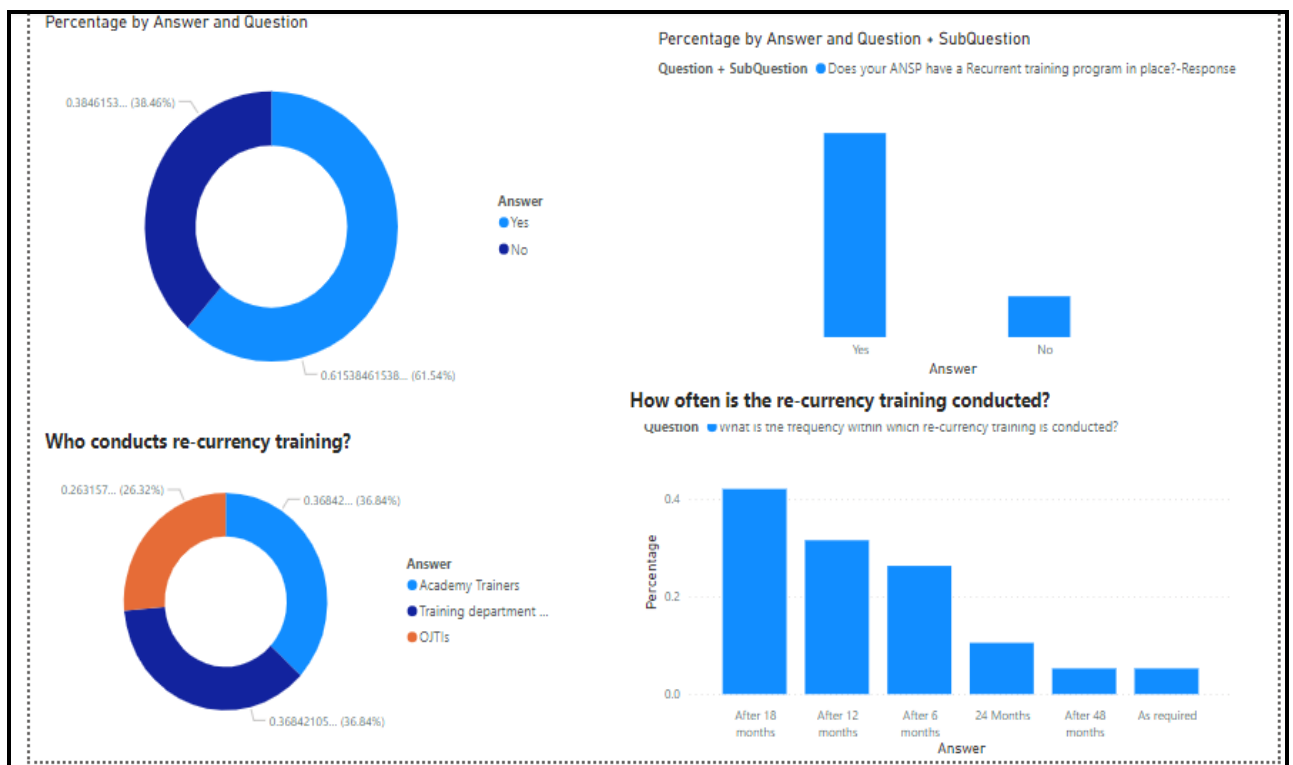
The Survey requested the respondents to rate their own evaluation of challenges to attaining the required competence and the responses were as follows.

✈ Lack of training on emerging issues   63%

✈ Lack of abridging program   42%

✈ Lack of Recurrent training   37%

✈ Quality of OJT   32%

✈ Quality of training at the school   15%

e)   Special   training   including   introduction/indoctrination   to   new technologies/emerging issues.

Several areas were considered under the emerging issues;

i.   **Human factors**

The survey further sought to establish if the ANSP has incorporated Human Factors (HF) within the training and operational environment; Those ANSPs that have implemented are 82% while 18% have not.

ii.   **Incidence related assistance program**

It also sought to establish if the ANSP has, an incidence related counselling program. Those ANSPs that have implemented are 36% while 64% have not.

iii.   **Personnel error management training**

It again sought to establish if personnel error management is incorporated at any stage of the training. Below table represent the results:

Stage	Percentage
Incorporated during OJT	30
Incorporated during Training at the Academy	27
Done on adhoc basis	24
Done at regular periods	11
Not implemented	8

f)   Determination of training needs and Existence and duration of review of ATC training program

The Survey first determined the existence of training needs and whether they are regularly reviewed. 37% of the States reported to review training needs every year while 37 % reviewed within a period of between 2-3 years. The rest (26%) review their training needs once within a period of over 4 years.

The Survey established that 85% of the States have a plan while 15% do not. Of the 85% who have training plans, only 47% reported that the implementation is done above 75% of the plans.

The survey also sought to establish if the ANSP does regular review of the training programs. The results were as follows in the table below:

Duration for review	Percentage
Annually	21
More than 3 years	15
More than 10 years	5
Not often	11
On need basis/Regularly/Often	48

2.3 OBSERVATIONS

2.3.1. Identified challenges in proficiency

- Lack of training on emerging issues.

- Lack of abridging program.

- Lack of Recurrent training.

2.3.2. Other Identified challenges in ATC Training practices

- Absence of regular review of training needs and implementation of training plans.

- Inadequate OJT program.

- Inadequate policy development and implementation of continued proficiency.

2.4 RECOMMENDATIONS

2.4.1 Identify differences in training programs and develop and mechanism to harmonize training and abridging programs.

2.4.2 States, through industry stakeholders, to develop a plan on accelerating training on emerging issues in AFI, key among them, CISM, HF, Threat and error management

2.4.3 Require AFI states to incorporate abridging programs, OJT, recurrency and continued proficiency evaluation as per ICAO Doc 10056 in their training programs

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TERMS OF REFERENCE OF THE AIR TRAFFIC SERVICES COMPETENCY STUDY GROUP (ATSCSG)

Terms of Reference (TOR)

1   The ATSCSG will review and assess the adequacy of training in the following areas against ICAO Annex 11 requirements, Doc 4444 and common operational requirements (industry best practices) as follows:

   a) Aviation Training Academies, schools and institutions.

   b) Abridging (conversion) training being provided by ANSPs in order to bring their candidates to set Standards and to specific requirements air traffic services units (ATSUs) requirements (airspace configuration, aircraft movements, procedural or radar control, etc.).

   c) Type and quality of on-the-job (OJT) training being provided, covering both initial and in-service OJT.

   d) Recurrent training.

   e) Special training including introduction/indoctrination to new technologies.

   f) Development and implementation of training programmes and training plans (Ref. ICAO USOAP Audit reports)

   g) ANSP mechanisms to identify and rectify competency deficiencies

2.   The ATSCSG will review the shortcomings in these areas and will make recommendations to the ATM/AIM/SAR SG to address and rectify them, so as to close the gaps identified.

3.   Surveys should be conducted to cover all AFI States. However, in order to manage costs, time and other resources, visits should be taken to selected academies/schools/institutions in AFI States and detailed focus should be on the four institutions with low output/enrolment of ATM and AIM (including Message Handling) candidates, and four with the highest output. In addition, four ANSPs having the highest number of UCRs should be visited.

4.   The ATSCSG will be guided by ICAO and will submit interim progress reports to the ESAF Regional Office through the TAG.

5.   The report and proposals of the ATSCSG will be submitted to the ATM/AIM/SAR Sub-Group.

6.   The Study Group may, with the agreement of the Secretariat invite other expertise as necessary.

REFRENCE(S):

ICAO Doc 9841 Manual for Approval of Training Organizations

ICAO Doc 9868 Procedures for Air Navigation Services- Training

ICAO Doc 10056 Manual on Air Traffic Controller Competency-based Training and Assessment

ICAO Doc 10144 ICAO Handbook for CAAs on the Management of Aviation Safety Risks related to COVID-19

ICAO Assembly resolution A38-12, Appendix D