57th CONFERENCE OF
DIRECTORS GENERAL OF CIVIL AVIATION
ASIA AND PACIFIC REGIONS

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AGENDA ITEM 4:   AIR NAVIGATION

INTRODUCING ADVANCED TECHNOLOGY TO IMPROVE ENGLISH PROFICIENCY TEST FOR AVIATION

Presented by the Republic of Korea

SUMMARY

The Republic of Korea continues to make efforts to improve the English Proficiency Test for Aviation (EPTA) to faithfully reflect ICAO Standards and Recommended Practices. Difficulties commonly experienced in the Republic of Korea are similar to those encountered by the other Contracting States where English is not the first language. The Republic of Korea cooperates closely with the ICAO to apply advanced technologies, including digitalization and artificial intelligence (AI), and improve aviation test procedures. By sharing how the EPTA has been improved, the international aviation community can contribute to the development of aviation safety.

INTRODUCING ADVANCED TECHNOLOGY TO IMPROVE ENGLISH PROFICIENCY TEST FOR AVIATION

1. **INTRODUCTION**

1.1   The English Proficiency Test for Aviation (EPTA) was introduced to prevent possible incidents and accidents that could be caused by communication errors that arise during international flight operations. In accordance with ICAO international standards and recommended practices (SARPs), the Republic of Korea has introduced an evaluation system for pilots and air traffic controllers who work in international air transport.

1.2   The EPTA has been in place since 2006 based on ICAO Annex 1 and ICAO Doc 9835. Pilots and air traffic controllers engaged in international air transportation operations are required to demonstrate ICAO evaluation level 4 or higher English proficiency.

2. **AVIATION ENGLISH TEST – EXPERIENCE AND PROBLEMS**

2.1   The Republic of Korea experienced several problems in the early stages of the EPTA implementation:

 - Resistance from the pilots and air traffic controllers who were reluctant to take the test

 - Doubts about the quality of the test questions, and concerns as to whether they reflect actual operational usage of aviation English

 - Doubts about the objectivity and efficiency of questions, as well as the evaluation process

 - The lack of mutual recognition of the EPTA results among the ICAO Contracting States

 - Inadequate English proficiency training system

3. **PROGRESS IN IMPROVING THE EPTA**

3.1   The Republic of Korea has taken measures to improve the overall EPTA system, reflecting amendments to the ICAO SARPs, in the following ways:

 - Improving the objectivity of the evaluation by transforming the method of evaluation. In the old version of the EPTA, the rating was calculated by averaging results from three evaluators. Now, in the new EPTA, the third evaluator is only employed in the event of a disagreement among raters or a disagreement between aviation and language expert raters.

 - Incorporate the operating environment more in test questions in order to evaluate the ability to use standard phraseology in an actual working environment and to speak cogent English when there is no applicable standard phraseology.

 - Publishing EPTA guidebooks, standard textbooks, and multimedia learning materials to support the successful learning of aviation English.

 - Developing test items on an ongoing basis to supply multiple versions of the test that can meet the needs of a growing and more diverse pool of test applicants

 - Continuing to improve training for raters and interlocutors to increase the reliability of evaluation

3.2   After making positive changes to the EPTA system in 2019, a survey of flight crews and air traffic controllers led to the finding that there was still room for further improvement. The main findings of the survey are as follows:

- More information and guidance related to the test are needed (~ 40%).

- The current learning system and training materials are insufficient: lack of practice examples (~ 28%) and lack of training materials (~ 22%).

- The number of test slots is too limited.

- Only one EPTA test site is available currently (need to improve the accessibility).

- The exam needs to be able to accommodate more applicants (from the current 10 to 20~30 to accommodate more applicants).

3.3   Some Korean applicants went to other States to take the test and obtained the required level because of more generous rating systems. Typically, the Korean government recognizes English proficiency ratings from other States based on the ICAO's spirit of mutual recognition of licenses and certifications. However, there are differences in grade and validity period, and the Contracting States have different operating systems. Out of the total 186 States, 70 States (approximately 38%) do not thoroughly comply with Language Proficiency Requirements (LPRs) or SARPs and have differences pertaining to Annex 1, Standard 1.2.9.1, Standard 1.2.9.5, and Recommendation 1.2.9.6

- 147 States (~ 79%) conform to ICAO Annex 1 Standard 1.2.9.1 – Pilots and ATCOs shall demonstrate the ability to speak and understand the language used for radiotelephony communication.

- 144 States (~ 77%) conform to ICAO Annex 1 Standard 1.2.9.5 – Level 4 and 5 holders shall be formally evaluated at regular intervals.

- 125 States (~ 67%) conform to ICAO Annex 1 Recommendation 1.2.9.6 – Level 4 holders should be evaluated at least once every 3 years / Level 5 holders should be evaluated at least once every 6 years.

4.   EVALUATIONS AND FUTURE PLANS

4.1   The government of the Republic of Korea continues to make efforts to enhance the EPTA testing system to faithfully reflect ICAO Standards and Recommended Practices, ICAO Doc 9835, and Manual on the Implementation of ICAO Language Proficiency Requirements.

4.2   The difficulties experienced in Korea are similar to those some Contracting States face as they do not use English as their first language.

4.3   The Republic of Korea plans to incorporate advanced technologies, such as artificial intelligence (AI) and deep learning, based on the digitalization of data, as was discussed in the recent ICAO High-Level Conference on Covid 19 (HLCC 2021).

- The validity and suitability of the question sets will first be evaluated and improved by an AI algorithm that will soon also be used in other testing fields.

- Once the effectiveness is confirmed, Korea will share the results with the ICAO Secretariat and the Contracting States to improve the quality of EPTA tests in States where English is not the first language.

- Korea wishes to cooperate closely with the ICAO by applying advanced technologies, such as digitalization and AI (artificial intelligence), to improve the EPTA, and share the results with the international aviation community to contribute to the development of aviation safety.

5.   CONCLUSIONS

5.1   Global compliance of ICAO LPRs and SARPS pertaining to Annex 1, Standards 1.2.9.1, 1.2.9.5, and 1.2.9.6 is still underway. Approximately 38% of States have informed differences in respect to the ICAO SARPs, requiring further attention and unified effort from all Member States.

5.2   Korea continues to make every effort to enhance the EPTA testing system so that it faithfully reflects the ICAO Standards and Recommended Practices. The difficulties experienced in the Republic of Korea are similar to those encountered in other Contracting States that do not use English as their first language.

5.3   The Republic of Korea aims to cooperate closely with the ICAO in applying advanced technologies, such as digitalization and AI, to improve aviation testing procedures. The international aviation community can contribute to the development of aviation safety greatly by sharing the achievements it made in the English Proficiency Test for Aviation (EPTA) improvement.

6.   ACTION BY THE CONFERENCE

6.1   The Conference is invited to:

   a) Urge States and Administrations to consider giving due attention to the necessity of evaluating the EPTA results in a more standardized way, in alignment with the provisions of Annex 1.

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