



WORKING PAPER

ASSEMBLY — 41ST SESSION

TECHNICAL COMMISSION

Agenda Item 30: Aviation Safety and Air Navigation Policy

30.3 Relevant Outcomes of the High-level Conference on COVID-19, Safety Stream (HLCC 2021)

CURRICULA FOR VIRTUAL TRAINING - THE NEW NORM

(Presented by Indonesia)

EXECUTIVE SUMMARY

Virtual training has become an essential part of today's blended learning landscape. This strategy allows training managers to easily reach teams of all sizes and locations, especially for an agile and remote workforce. Through virtual training platforms, staff acquires new knowledge and skills more efficiently, especially in a fast-paced world. However, there is a global need for standardized

Action: The Assembly is invited to request ICAO to develop curricula to be used in virtual training courses, within the allotted budget, to ensure a harmonized and uniform approach to global aviation training.

<i>Strategic Objectives:</i>	This working paper relates to the Safety and Air Navigation Capacity and Efficiency Strategic Objectives.
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<i>Financial implications:</i>	The activities referred to in this paper will be undertaken with resources identified in Regular Budget.
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<i>References:</i>	Annex 19, <i>Safety Management</i> Doc 9734, <i>Safety Oversight Manual</i> Doc 9735, <i>Universal Safety Oversight Audit Programme</i> Doc 7192, <i>Training Manual</i> Doc 9625, <i>Manual of Criteria for Qualification of Flight Simulation Training Devices</i> Doc 9841, <i>Manual on the Approval of Training Organizations</i> Doc 10056, <i>Manual on ATC Competency Based Training Assessment</i>
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1. INTRODUCTION

1.1 Virtual training has become essential to today's blended learning landscape. This approach allows training managers to easily reach teams of all sizes and locations, especially for an agile and remote workforce. Through virtual training platforms, staff acquires new knowledge and skills more efficiently, especially in a fast-paced world. By making staff training more convenient and engaging with the help of online learning platforms, you can immediately address their learning needs to unleash the fullest potential of your staff no matter where they are.

1.2 One of the most important decisions when switching to virtual training is the utilization of reliable and robust technology that is easy to use. Dynamic scheduling is created for maximum engagement and sign-up managed with user-friendly registration. This is paired with software that allows for easy and secure access and users to listen to audio and watch videos. This synchronous online learning requires students to log in and participate in class at a specific time and date.

1.3 There is an identified need for a harmonized and uniform global curriculum for virtual training developed by ICAO to be utilized by States.

2. DISCUSSION

2.1 With the world in various states of lockdown due to Covid-19, Indonesia moved to virtual training much earlier than originally planned. This allowed staff to gain access to training that would have otherwise been impossible. This boosted inclusivity and allowed everyone in aviation to have access to training in a structured and easily accessible way while removing the need for travel and time away from work. Home life remained uninterrupted, and remote staff members were always included in the training. Our online Instructors have made an effort to make things personable and ensure that people feel included. Indonesia brought everyone together as one aviation community.

2.2 Indonesia's experience with a typical face-to-face workshop proved that surprisingly high costs are incurred through traveling to a training event. In addition to savings on travel, virtual training removes the additional costs of a training venue, providing meals, refreshments, printed materials, and other related expenses. Therefore, a greater return on investment is realized, and a large amount of the training budget is saved, which can then be used elsewhere.

2.3 In addition, the advantage of using simulators is that training conditions can be simulated that are difficult to replicate in a real-life environment. Simulators allow students to experience various challenging scenarios, each of them different. The ease with which a simulation scenario can be altered ensures that students are continually challenged throughout the process. Instructors can change conditions and scenarios to focus on students' weaknesses or introduce new aspects of procedure. It helps accelerate knowledge transfer in an environment directly applicable to the job in real life.

2.4 The use of simulator training further enables students to demonstrate their skills in a safe environment where errors can be made before transferring to a specific position. The simulations are dynamic and engaging, keeping students focused on the task at hand. They are also significantly cheaper to run and help to cut down on overall training costs.

2.5 Air Traffic Controllers (ATC) and pilots are in increasing demand worldwide, and the demands of the aviation industry are not easily met. Virtual training can be the solution to address this problem. Using virtual reality and simulation, ATC students can conduct various training scenarios like

simultaneous arrivals and departures on parallel runways as well as quick decision-making and judging separation distances during high traffic periods.

2.6 Airports are also constantly looking for new ways to enhance safety and security measures, operational efficiency, and overall passenger satisfaction. Online courses will take students through different challenges and provide tools to address them. It can be tailored to new airport professionals and incoming public officials to enhance the individual's understanding of aviation requirements.

2.7 In the case of cybersecurity, tools and expertise can be provided to develop the behaviours organizations need from their employees for better protection and stronger resilience. For example, with Managed Security Awareness, training facilities can avoid expensive security incidents and data breaches by having employees on the lookout for social engineering attacks, like phishing, and preparing them to report mistakes that could result in data loss.

2.8 The pressure continues to rise for companies to reduce their carbon footprint due to the escalating global carbon emission reports, especially since the introduction of the UN Sustainable Development Goals initiative in 2015. Virtual training can significantly reduce the carbon emission caused by air travels. In addition, virtual training also helps save the environment by going paperless.

2.9 Carbon usage is our planet-wide problem and must be tackled by us all, individuals and businesses alike. Investing in virtual training provides you with the opportunity to mitigate those big carbon impactors that traditional classroom training can cause.

2.10 Indonesia and ICAO jointly established the Developing Countries Training Program (DCTP) in 2021. Sponsored by the Indonesian Government and administered by the ICAO Technical Cooperation Bureau, the DCTP provided fellowships for specialized training programs conducted by the Human Resources Development in Transportation Agency (HRDTA). The DCTP commenced in May 2021 for a period of three years and will provide 138 Fellowships over the course of this period. The Government of Indonesia bears the training fees for DCTP participants, of which most will be virtual courses.

3. CONCLUSION

3.1 The COVID-19 pandemic has highlighted the importance of virtual platform as a new method of training delivery. Virtual training is the new norm going forward, and it is essential to ensure that all States may benefit from these digital solutions. Virtual training provides innumerable advantages to Instructors with few shortcomings, serving as a cost-effective solution to the current shortage of qualified applicants. It is not an instant fix for the staffing crisis but a fantastic aid to the aviation world.

3.2 Use of simulators and virtual reality is the best way to optimize training for potential candidates. Actual physical time spent at a position can now be focused on more essential aspects of the job rather than the basics. The reduction of time spent at physical locations and increase in time on simulators allows for increased numbers of candidates to be brought through training, as it maximizes the time available for students to learn in a real-life environment.

3.3 It is no surprise then that simulation training is increasingly used by the aviation industry to meet the demands for more trained personnel. The power of virtual training allows learning for all, no matter where they are in the world. Training has never been easier or more affordable.

3.4 To ensure a harmonized approach in virtual training with standardized curricula, ICAO should develop a harmonized and uniform global curriculum for virtual training to be used by training facilities. This action will ensure a global uniform approach to virtual training and assist State and industry in meeting the demands for more trained personnel.

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