

Flight Laboratories Role in Aviation Related Projects and Teaching Methodology Development. Polish and Georgian Case Studies

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Abstract:

Aviation is the most dynamic and fast developing transport mode, strong aviation has a key role in a country's strength and economic development. Aviation system connects with other modes of transportation, where federal responsibility for managing and regulating air traffic operations intersects with the role of state and local governments that own and operate most airports. The constant growth of the flights intensity in the world faces new challenges for international aviation organizations to increase safety requirements, for this reason implementation of the innovative technologies and the taking following measures are necessary: increasing the flight altitudes between the aircrafts, raise the airspace bandwidth; using satellite navigation; reduction of economic indicators and flight performance of routes in order to optimize flight time; improvement of landing trajectories for less negative effects on populated areas (emissions and noise).

Above mentioned technological changes will have an impact at the qualification level of aviation specialists, both in the air and on the ground, and will lead to the formation of their knowledge, and responsibilities, as well as requires development of new skills. Based on statistical data, considering the increase in the intensity of flights, it is also important that there should be a sufficient number of qualified and competent people personnel to ensure a safe and efficient aviation system, for these reasons it is important to integrate into aviation educational programs new innovative, practical based teaching methodologies in order to meet requirement of new technological environment in aviation field.

In the research is analyzed aviation education modern requirements and technological development tendencies, provided gap between new technologies and aviation educational programs teaching methodologies, use of flight laboratories in Poland and Georgia analyzed as a case study. Paper provides flight laboratories use as a recommended concept in aviation education for students projects and teaching methodology development.

Keywords: aviation education, flight laboratories, teaching methodology, innovative technologies.

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