An Evaluation into Pilot Proficiency Assessment and the Current State of Training in the Industry

Pilot proficiency assessment has been a debated topic, especially in recent years. Determining effective ways to assess proficiency has been the focus of many industries, including similar high-risk industries such as health care and nuclear power industries. For the purposes of this paper, a comprehensive investigation into the current state of pilot training was conducted to analyze and compare curriculum components, proficiency levels, assessment methods and overall safety outcomes of each instructional program. This analysis includes pilot training programs from the United States, Australia and the European Union, as they relate to pilot licensing. As flight training technology and hour requirements increase, alternate methods of instruction have become more prominent in the industry worldwide. Evaluating the mechanisms that comprise the various international instructional programs, such as the training devices and hours accrued in these devices, is important in understanding how they affect and influence proficiency levels and safety.

Abstract:

Table 1. License Name

<table>
<thead>
<tr>
<th>Organizations</th>
<th>License</th>
<th>Number of Pilots with License</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Aviation Administration (FAA)</td>
<td>Airline Transport Pilot (Aircraft)</td>
<td>945,580 (2012)</td>
</tr>
<tr>
<td>European Aviation Safety Agency (EASA)</td>
<td>Airline Transport Pilot License (aeroplane)</td>
<td>Unknown**</td>
</tr>
</tbody>
</table>

Table 2. License Requirements

<table>
<thead>
<tr>
<th>Organization</th>
<th>License Name</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAA</td>
<td>14 CFR Part 61.16</td>
<td>61.250 • 21 years old • 1500 or total time (TT) • 500 cross country • 100 night flight time • 75 instrument time (acclimated) • 250 total in command (PIC) • 100 cross country as PIC • 25 night flight time as PIC</td>
</tr>
</tbody>
</table>

Discussion and Future Work

This exploratory study into licensing requirements found that there are strong similarities between the three organizations regarding total time, instrument time, and night flight. However, there were differences in cross country time, hours in a type of aircraft, and age limit.

• In addition to incorporating more country-specific data, particularly the European Union, future research into (1) an in-depth comparison of curricular, (2) assessment or examination requirements, and (3) safety comparison for different organizations will be conducted.

• The curriculum comparison will include an investigation into the training devices, hour requirements for these training devices, and course content.

References


Mary E. Johnson, PhD
Department of Aviation Technology

Stewart Schreckengast, PhD
University of South Australia.
Division of Information Technology, Engineering and the Environment