

20121031 - Ergonomization needs in general aviation (summary) - 2010

[Data] [[<Normal page](#)] [**PEREZGONZALEZ Jose D [au] & Kam HP YIU [ed] (2010)**]. *Ergonomization needs in general aviation (summary)*. Journal of Knowledge Advancement & Integration (ISSN 1177-4576), 2012, pages 313-315.]

New technologies in GA

Perezgonzalez, Gilbey & Diaz Vilela (2010²) examined the need for new technologies by single pilot operators in the general aviation industry on a global scale. This was achieved by using an online survey requesting participants to rank the importance of various flight management features³. These were 22 technological features in total, grouped into five distinctive categories.

Illustration 1 sums up the results of the study. Overall, they showed that cost factors were regarded as the most important feature by the group of general aviation pilots, followed by flight support. The results also indicated that instructors valued new flight technologies the most, while female pilots were less concerned with new flight technologies.

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Illustration 1. General aviation pilots' ranking on the importance of new flight management features

Pilot	Low cost	Flight support	Monitoring	Post-flight analysis	3-D display
Male	Important	Medium importance	Little importance	Little importance	Little importance
Female	Medium importance	Little importance	Little importance	Little importance	Little importance
Airplane	Medium importance	Medium importance	Little importance	Little importance	Little importance
Helicopter	Medium importance	Medium importance	Important	Little importance	Very little importance
Glider	Important	Medium importance	Little importance	Very important	Little importance
Training	Important	Medium importance	Medium importance	Medium importance	Little importance
Instructing	Important	Medium importance	Medium importance	Little importance	Important
Business	Medium importance	Medium importance	Little importance	Little importance	Little importance
Recreation	Important	Little importance	Very little importance	Little importance	Very little importance
New Zealand	Medium importance	Medium importance	Medium importance	Little importance	Little importance
USA	Important	Medium importance	Little importance	Little importance	Little importance
No License	Medium importance	Medium importance	Medium importance	Medium importance	Little importance

Private License	Medium importance	Medium importance	Little importance	Little importance	Little importance
Commercial License	Medium importance	Medium importance	Medium importance	Little importance	Little importance
Air Transport License	Medium importance	Medium importance	Little importance	Little importance	Little importance
Average	Medium importance	Medium importance	Little importance	Little importance	Little importance

Methods

Research approach

Exploratory study investigating GA pilots' needs for new technologies.

Data

70 pilots participated in the survey. The majority of the sample represented male, airline pilots, based in New Zealand.

Materials & analysis

An online questionnaire with a list of 22 technological features, adapted from Perezgonzalez and Lee (2009)¹. Participants were asked to rank the importance of the various technological features and cost factors on a six-anchor Likert scale. The 22 technological features were reduced to five components (principal component analysis) and the data was analysed using SPSS version 16.

The results are transformed into color-coded labels for this article, according to the following convention: 0.00-0.49, No importance (white); 0.50-1.49, Very little importance (green); 1.50-2.49, Little importance (yellow); 2.50-3.49, Medium importance (orange); 3.50-4.49, Important (red); 4.50-5.00, Very important (purple).

References

1. **PEREZGONZALEZ Jose D (2009)**. *Ergonomization needs of student pilots*. Journal of Knowledge Advancement & Integration ([ISSN 1177-4576](#)), 2011, pages 48-51.
2. **PEREZGONZALEZ Jose D, Andrew GILBEY & Luis DIAZ VILELA (2010)**. *New technologies in general aviation*. Aviation Education and Research Proceedings ([ISSN 1176-0729](#)), volume 2010, pages 55-59.

+++ **Notes** +++

3. Pilots rated the importance of various technological features to their GA flying according to a 6-point Likert-scale running from "0, Not important" to "5, Very important".

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
Wiki of Science - Ergonomization needs in general aviation (further knowledge)

Wiki of Science provides an [in-depth analysis](#) of this research, or you can also access the [original article](#).

Wiki of Science - Ergonomization topics

Access to further knowledge on ergonomics and ergonomization can be found in this Wiki of Science table of contents.

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page revision: 8, last edited: 1 Nov 2012, 11:58 (8 seconds ago)

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