

## Concept Design for Technology Enhanced, Self-paced Student Lesson

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## **Concept Design for Technology Enhanced, Self-paced Student Lesson**

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New simulation software and hardware offers improved training capability at reduced costs. However, despite continued technological improvements, it can be difficult to follow sound training principles in a simulation-based, self-study format without the aid of an instructor. One domain that is in need of self-study opportunities is general aviation (GA); in particular, aviation weather concepts. Current aviation weather self-study materials lack the ability for pilots to practice learned aviation weather concepts and receive feedback on performance. Therefore, the aim of this study was to examine the efficacy of a desktop simulation-based, self-study lesson on GA missed approach due to weather. Experimental participants received the simulation lesson module with six simulation practice scenarios, while control participants received an instructor led lesson without practice. Results indicated that pilots-in-training who experienced the self-study lesson followed the same pattern of learning outcomes as did participants in an instructor led lesson.

*Keywords:* aviation, simulation, training, simulation-based training