



## A preliminary investigation of Aviation eLearning Cockpit Procedure Trainer

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### **Background**

Existing pilot training has remained largely unchanged in its 70-year training history. There is scepticism regarding the shortcomings of MPL training and the use of technology to support airline pilot training in comparison with traditional approaches. This preliminary investigation examines the effectiveness of technology supported MPL as a means to providing more cost-effective, efficient and appropriate training for pilots operating in a digital era.

### **An App for Cockpit Procedure Trainer**

The app is a training tool enabling the user to be trained in standardized procedures and checklist flows in a virtual cockpit. It is designed to cut training costs, bridge a gap in training, and enhance the overall training quality for pilots undergoing so called initial type rating training, and in a later version also recurrent training. The developer, **Aviation eLearning** (AeL) is in cooperating with Lund University in order to evaluate, the use of ePilot-Training.

### **Research focus**

Can the use of ePilot-Training on iPads be of value in effectively training pilots in Standard Operating Procedures (SOP)? Specifically:

- Can current pre-simulator Other Training Devices (OTD) for pilot training be effectively replicated or supplemented, using digital technologies such as the AeL ePT App?
- Can the AeL ePT App, offer an increase in quality and cost reductions in pilot training?

### **The study**

The study encompassed 20 students, four of whom had access to the AeL ePT app. The other 16 students did not have access to the app. During the introduction and start-up of the extended part of MPL *Phase 2: Basic* (called Basic 2:3 at Lund University School of Aviation) and prior to the first Boeing 737-800 FTD simulator session the 16 students were scheduled for two sessions in a so called Paper Tiger and one session in an OTD as preparation for the simulator training. The group of four who had access to the ePT **did not** get scheduled for *Paper Tiger 1*, *Paper Tiger 2* and *OTD 1* session. Instead they received a tailored,



Instructor guided and scenario based classroom briefing. The instructor used a PowerPoint presentation, while the students were practicing procedures using the ePT on iPads. In addition they were scheduled two additional, 2 hr sessions, to give room for further ePT **self-studies** prior to the first Boeing 737-800 FTD simulator session. All 20 students and a total of 7 instructors were then invited to answer Questionnaires designed to help us understand how students prepared and how they performed under a specific phase of each session. The four students using ePT were specifically asked for feedback on their experiences of ePT. Five simulator sessions were used as an initial indicator of whether training with the ePT had any influence on their learning.

### Preliminary findings

While we are still collecting and analysing data we have some tentative findings. Preliminary results indicate that students, using the ePT, compared to the normal fixed based trainer during the training, performed to the **same standard** as students using **instructor guided fixed based trainer**. Feedback from participants who used the ePT in their training suggests that the app is an effective way of training. It allows constant access to instruction and supports the needs of pilots who are mobile learners with constrained windows of opportunity for learning, due to the nature of their jobs. It provides an easy means to refresh normal procedures and practice them. It contains more information and illustration, and the feedback provided makes the procedures more understandable.



Screenshot of ePT B 737 NG Normal Procedure "Before Start Procedure"