Chapter IX
Distance Learning in Business Aviation Industry: Lessons Learned and Implications for Theory and Practice

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ABSTRACT
The objective of this chapter is to understand the expectations and behaviors of business aviation pilots towards online learning. The authors believe that the company that is able to offer an integrated, individualized, and useful online training experience will gain a significant competitive advantage. To that end, the authors have researched and synthesized studies that are currently available and relate to this important future product. In addition, an exploratory survey of business aviation pilots and interviews with key aviation industry players are used to determine current attitudes and expectations towards online learning. The scope of this chapter will be limited to exploring the niche market of business aviation pilots using the aviation training company CAE SimuFlite and their new Simfinity™ technology. However, the authors consider the concepts discussed to be applicable to all business aviation pilots.
INTRODUCTION: THE BUSINESS AVIATION INDUSTRY

The business aviation industry is a niche market within the general aviation industry that is concerned with air travel services specific for business customers. This industry ranges from individuals owning one small piston powered aircraft to multi-national corporations that possess a number of larger long range jet aircraft that can carry up to 19 passengers over several thousand miles. The majority of business aviation missions are conducted on demand. Only a handful of companies operate scheduled flights and are typically known as “corporate shuttles.” Dillon (2007) discusses the strategies for gaining practical experience while serving one’s country in the armed services. The business aviation industry provides an excellent opportunity for armed forces personnel interested in applying their military training to civilian careers.

According to the National Business Aviation Association (NBAA), the number of companies operating business aircraft increased nearly 50% between 1999 and 2001. This is largely due to the corporate world’s realization that the use of business aircraft as a means of transportation and a viable business tool leads to increases in efficiency and productivity (NBAA Business Aviation Fact Book, 2002). The worldwide fleet size for business aviation exceeds 22,000 aircraft, with the vast majority of business aircraft (over 15,000) located in the United States. Moreover, in a recent survey by Honeywell Aerospace Company, the expected number of business jet deliveries worldwide over the next decade will exceed 8,400 aircrafts valued at over $130 billion. Each aircraft that is scheduled for full-time operations would typically require five pilots per aircraft—over 100,000 business pilots required worldwide (with over 75,000 for the U.S. alone). This means that over the next ten years, more than 40,000 new pilot positions will be created due to the arrival of new aircrafts alone.

THE STATE OF BUSINESS AVIATION TRAINING

Business aviation pilots are highly trained and usually possess advanced pilot credentials, such as an Airline Transport Rating (ATP). In the U.S., business aircraft fly under strict regulations as defined by the Federal Aviation Regulations (FAR) of the Federal Aviation Administration (FAA). The training required under the FAA and similar regulatory bodies worldwide is very specific, where a pilot in command (captain) requires continuous training every six months and a second in command (co-pilot) will require training at least once a year. The training is aircraft specific and is requisite for each aircraft the pilot flies.

At a meta-level, the key difference between existing online education systems and those for aviation pilot training relates to the online education that is envisioned for successful pilot training. The intent of this study is to empirically explore the relevant concepts and ideas based on perceptions and previous studies of pilots coupled with what is envisioned for the future of online distance learning (i.e., data centric, artificial intelligence, simulation, and interactive multimedia).

Today, this training is almost always conducted in a combination of personnel study, classroom lectures, and simulator training. One major facility that conducts this type of training is CAE SimuFlite located in Dallas, Texas. SimuFlite was opened in 1984 as the first of its kind to offer multi-platform training in a comfortable environment at one location. That same year, the first all-simulator business jet type rating was earned. Simulator training is the standard for today’s pilot to earn aircraft type ratings because it is more cost effective and safer than using actual aircraft.

In the latter part of the 1980s, SimuFlite introduced a computer-based training (CBT) program called FasTrak. It was tedious and non-engaging. Pilot customers were dissatisfied and therefore FasTrack was eliminated in 1991. Unfortunately, this failure damaged the reputation of SimuFlite and