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# **Distance Education in the Business Aviation Industry: Issues and Opportunities**

Mahesh S. Raisinghani, University of Dallas, USA  
Mohammed Chowdhury, University of Dallas, USA  
Chris Colquitt, University of Dallas, USA  
Pedro M. Reyes, University of Dallas, USA  
Nilofar Bonakdar, University of Dallas, USA  
Joseph Ray, University of Dallas, USA  
Jose Robles, University of Dallas, USA

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## **ABSTRACT**

*The purpose of this research is to understand the expectations and behaviors of business aviation pilots toward online learning. The authors believe that the company 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 toward online learning. The scope of this paper 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.*

*Keywords: active learning; business aviation industry; decomposed theory of planned behavior; visual imagery effective communication*

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## **INTRODUCTION: BUSINESS AVIATION INDUSTRY**

The business aviation industry is a niche market within the general aviation industry concerned with air travel services specific for business customers. This industry ranges from individuals owning one small piston-powered aircraft to multinational 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.”

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 (more than 15,000) located in the United States (U.S.). 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 more than \$130 billion. Each aircraft that is scheduled for full-time operations would typically require five pilots per aircraft — more than 100,000 business pilots required worldwide (with more than 75,000 for the U.S. alone). This means that over the next 10 years, more than 40,000 new pilot positions will be created due to the arrival of new aircrafts alone.

## **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 6 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 multi media). 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 in Dallas, Texas. SimuFlite 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; therefore, FasTrack was eliminated in 1991. Unfortunately, this failure damaged the reputation of SimuFlite and followed them for many years. Today, SimuFlite has more than 375 employees and 29 full-flight motion simulators. It has revenues of C\$150 million and is owned by CAE of Canada. CAE is a conglomerate dedicated to aerospace, defense and marine control technologies and training solutions. Based out of Canada, CAE generates revenues in excess of Canadian \$1 billion and employs more than 7,000 people (CAE SimuFlite, n.d.).

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