Overview

TCS provides simple, efficient, and comprehensive learning solutions to help flight students achieve their learning goals as quickly and economically as possible.

At True Course Simulations (TCS), we believe that anyone with enough drive, discipline and hard work can learn just about anything!

TCS provides efficient and comprehensive learning solutions (hardware, software, content, virtual instructor) to help flight students successfully achieve their learning goals as quickly and economically as possible.

At the heart of everything we do is our passion for transmitting knowledge. There is no greater gratification than seeing the spark in a student's eyes who suddenly understands and takes pride in his/her achievement.

Our unique teaching method is based on more than 20 years of experience in developing efficient learning solutions.

The course contains 30 hours of training material based on the FAA Private Pilot Certificate curriculum.

Each of the 60-lessons, including 77 interactive simulations, is designed to maximize integration and retention.

The unique combination of visual, auditory and kinesthetic exercises allows students to assimilate key concepts and skills on the ground ensuring they master them quickly.

- After passing the written exam, a minimum number of 40 flight hours is required for the Private Pilot Certificate.
- The average student requires 75 flight hours.
- The average student pays for 35 more hours of flight time than is required for certification. Using $200 for an "average" trainer, that's over $7,000 of cost.

Benefits:

- Reduce the cost of your flight training
- Reduce the time to get your wings
- Increase the enjoyment of flight training
- Access the course as long as you need it!

PROBLEM

- Pilot Shortage
  - 260,000 new pilots needed by 2029 (CAE, 2020)
  - 21% increase in total manpower between 2020 and 2029
- Outdated Training Methods
  - Majority of flight training programs require a 1:1 student to instructor ratio
  - During a pilot shortage, instructors are a top commodity
- Inefficient Results
  - The FAA requires a minimum of 40 hours of flight training to test for a Private Pilot certificate
  - The average student takes approximately 75 hours (FAA, 2023)

SOLUTION

- TCS has partnered with the largest flight training organizations in the world to develop a pilot training efficiency tool
- Virtual reality flight training
  - Artificial intelligence flight instructor
  - Virtual reality "Immersive Training Device"
  - Learning management system with learning records store

Hardware

At True Course Simulations (TCS), we are aviators and educators!

We developed the Immersive Training Device (ITD) and the Virtual Flight Instructor to encourage more youth to learn to fly with a better instructor to student ratio, and a technology that enhances the training experience.

Our simulators, curriculum and experience bridge the gap between the book and the aircraft and have proven to reduce time to solo by up to 30%. (Embry-Riddle Aeronautical University, 2022).

Our ITD flight simulator allows a student pilot to receive more life-like training by using haptics and virtual reality (VR). It is the most immersive and interactive way to learn.

In VR, an emergency scenario becomes real - You feel the engine cut out, execute the checklists while looking up at the mountains around you to maintain situational awareness before executing an off-airport emergency landing.

Virtual Reality Immersive Training Device (ITD)

- Turnkey Flight Simulation Station
- Built in Motion Actuators
- Professional Quality Flight Controls
- HTC Vive Pro II HMD or HP Reverb Headset
- Highly Durable Steel Construction

Virtual Flight Instructor Course

TCS' Virtual Flight Instructor allows for self-study and a break from the reliance on a 1-to-1 student to instructor ratio. Students are able to practice at their own pace, while the TCS system records all activity for post-flight analysis with an instructor.

Downtime trainer: Aircraft and instructor availability, weather and mechanical issues can cause delays, however, with the TCS virtual flight instructor, a student can work on the lessons on their own, anytime, day or night, rain, or shine.

Progress tracking: The virtual flight instructor records and displays student's activities. Their instructor can easily assess each student's progress and focus more specifically on their individual challenges. When students struggle in the real aircraft, they fly it virtually to hone their skills.

Increased student to instructor ratio: The TCS Learning System allows for up to 8 students per instructor. It incorporates 60 lessons with 75 simulations from fundamentals to cross- country operations. Our modular approach makes it easy to integrate into an existing curriculum.

 Currently, the ITD devices are only available at large part 141 schools and academia, such as Embry-Riddle Aeronautical University Daytona Beach and the US Airforce Academy. We are the only part 91/61 in the world as of April 2023 that has the ITD simulator as part of our flight program. This is part of our focus to provide for our flight students to accomplish more by flying at Leighnor!