



“YOU’RE MY FIRST STUDENT, YOU KNOW,” I VOLUNTEERED. “EXCELLENT,” HE SMILED. “THAT MEANS YOU’LL BE AROUND FOR A WHILE!”

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Becoming a flight instructor

BY MARK WILKINSON

KEVIN COMPLETED THREE BEAUTIFUL landings and taxied back to the ramp. We both knew what would happen next. I wondered which one of us was more nervous: Kevin, who was about to embark on the most unforgettable flight of his life—his first solo—or me, a wet-behind-the-ears flight instructor with fewer than 300 hours of flight time, about to send my very first student up alone.

I kept my composure, penned my signature on the appropriate paperwork, and with a pat on the shoulder told Kevin to have fun. With a tinge of melancholy remembering my own first solo, I waved him off.

His first solo was also mine—as a flight instructor.

Twelve days earlier, on the warm and sunny evening of June 6, I rushed from an insurance check flight in the school's Piper Arrow to meet Kevin for the first time. The stock trader, who was in his forties, had already logged a few dozen hours. He greeted me with a friendly demeanor.

“You're my first student, you know,” I volunteered.



CFI to CFI

GREETINGS AND WELCOME TO THE

AOPA Air Safety Foundation's brand new quarterly flight instructor newsletter.

Each *CFI to CFI* issue has brand new articles by instructors for instructors, the hard facts on accident causes and discussion on how to prevent them, and timely information on education opportunities such as upcoming seminars and flight instructor refresher courses.

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Make sure to opt in for the electronic version now. Visit www.asf.org/CFInews to take full advantage of this new communication channel.

I look forward to your comments and



observations.
Safe skies!

Bruce Landsberg
President, AOPA Air Safety Foundation

"Excellent," he smiled. "That means you'll be around for a while!"

TEACHER, FRIEND, PSYCHOLOGIST

There is a lot more to flight instructing than merely the art of teaching. I would have to morph into friend, disciplinarian, and psychologist, carefully weighing which technique might work with one but harm another, and always being mindful of individual limits and needs.

My students ranged widely in age, occupation, abilities, and motivations. Some absorbed every drop of knowledge with an inspiring passion that only further fueled my desire to teach, while others sported a sometimes unshakable stubbornness.

The greatest challenge of learning my new job—and what made it the most fun—was to adapt to these variables.

Barry was in his fifties and self-employed. He was nervous, introverted, and became overwhelmed with even the easiest of tasks. But I was determined to teach him to fly.

Little by little Barry relaxed and began to enjoy our flights together. He no longer fixated on the instrument panel and instead of being along for the ride he flew the airplane with more assertiveness. He was a slow learner, but each small step forward grew his confidence, and he was able to absorb more.

Landings, however, became his nemesis.

We ran through various exercises, some of which worked very well, and Barry slowly began to grasp landings. Holidays and work, however, forced Barry to take six weeks off from flying, an eternity at this learning stage. He returned rusty and nervous. Again, landings presented the greatest challenge. This time, however, Barry had little patience with himself. One bad landing was all it took to shut him down for the rest of the lesson.

Our sessions grew more frustrating for both of us, but I tried to remain encouraging and

suggested he fly with another CFI once or twice to possibly benefit from different teaching techniques. Sadly, Barry lost his drive and stopped flying.

I felt defeated, but this taught me that not everyone is meant to fly and success is not always the outcome of one's flight training.

Adam and Nai were polar opposites to Barry. In their early twenties, the pair came to flying with a fervent passion and enjoyed it from the very first day. They were a CFI's dream students: assiduous, easygoing, cool under pressure, and extremely motivated.

Barry taught me to always focus on the positive in order to foster confidence; however, I found that students such as

Adam and Nai could be pushed harder and held to much higher standards. If they were able to perform maneuvers within commercial standards, I'd push them to do so and it made them above-average students.

Pushing them also meant pushing myself, and I learned a lot from my time spent with them.

Alex was another unforgettable experience for a CFI.

He flies on the Red Bull Air Races circuit and is one of the world's top aerobatics

THE ADAGE THAT TEACHING IS THE BEST WAY TO LEARN NEVER CAME AS TRUE AS DURING MY DAYS AS A CFI.

pilots. What could I possibly teach him that he doesn't already know? I wondered when my boss assigned me to be his instructor.

Of course, there was a twist: Alex had just three weeks to earn an instrument rating and commercial certificate.

Teaching Alex presented a challenge that rested solely with me: I needed to organize myself to meet both his needs and those of my other students, using our limited time to the fullest. We flew hard, early in the morning and late at night, mixing instrument and commercial instruction in the air to maximize time. We spent hours on the ground reviewing procedures, regulations, and readying him for the knowledge and practical tests.

I assigned him homework when I left to fly with other students and returned to an exhaustive list of very well-thought questions that challenged me and sometimes prompted me to look up the answers. Alex took instruction well, studied hard, and impressed me with how quickly he understood and how precisely he could fly challenging DME arcs, holds, and instrument approaches. He aced both check rides, but I feel I got the best out of our time together. The adage that teaching is the best way to learn never came as true as during my days as a CFI.

A THRILLING RIDE

Being a flight instructor is a daily cocktail of emotions, from the awesome sense of responsibility to elation and frustration to highs and lows that stick with someone for the rest of their aviation career. Those first few landings with a brand-new student can be very exciting and scary, as can that first accidental and unexpected spin, but the rewards are immeasurable.

Most memorable is a CFI's first student solo.

Pacing the ramp on the morning of June 18, I tuned the handheld radio to tower frequency to hear the familiar and reassuring voice of Hanscom Field's most capable controller. Kevin was in good hands for his maiden solo flight.

He lifted off effortlessly into crystalline skies, went around the pattern once, performed a flawless touch and go, and found himself downwind again a minute later.

I grinned, elated for my student. What pride he must have felt up there. And what pride I felt. I had taught someone to fly.

Mark Wilkinson is a first officer on the Embraer 145 jet for a regional airline. He began flying in 2004 and lives with his family in Boston.

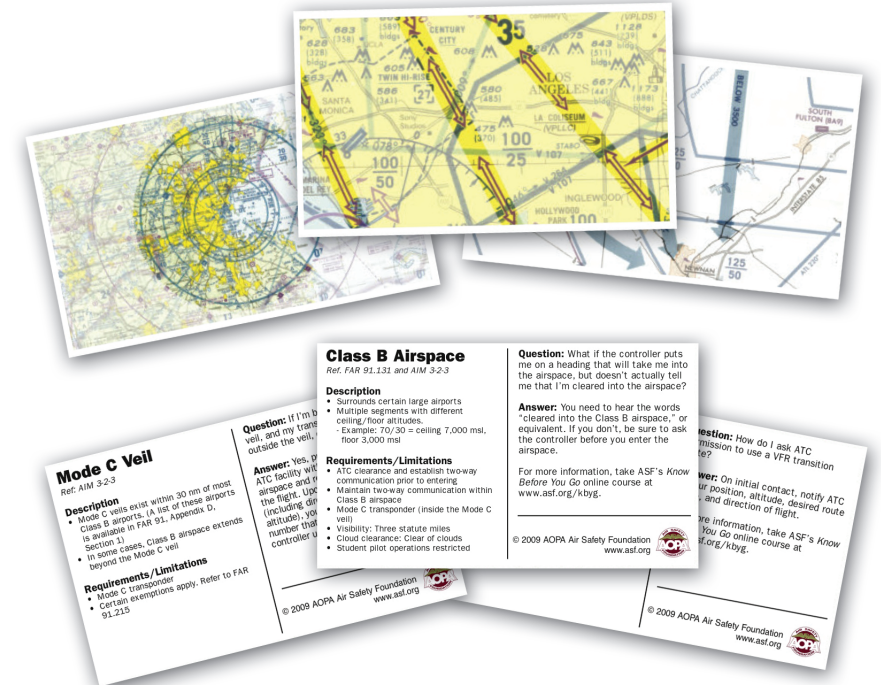
CFI tools

Airspace flash cards

SOME THINGS IN FLIGHT TRAINING can be bewildering at first, and one of them is to learn and describe the airspace categories in which we fly. Studying the various aeronautical charts and taking in the airspace dimensions and regulations can be a daunting task, especially with looming pressure of a checkride or flight review. That's why the AOPA Air Safety Foundation has developed airspace flash cards to make it practical, easy, and even enjoyable for pilots at any certificate level to absorb critical knowledge and keep the different categories straight. Each card includes a color depiction of the airspace, a description of its characteristics, and a discussion question.

Download the cards to print and share with your students and colleagues (www.asf.org/airspacecards.pdf). Visit the Web site for updates when airspace changes occur.

—Machteld Smith



FOR MORE INFORMATION ON THIS GO ONLINE (WWW.ASF.ORG)

Safety Quiz: Radio communication

The AOPA Air Safety Foundation quizmaster challenges you and your students to test your aviation savvy now! With timely topics and creative interaction, an online ASF Safety Quiz of your choice will have you and your students click away to a perfect score. Beware, though, because the quizmaster has upped the ante with some tricky questions, so read carefully before submitting the answer.

The quizzes use graphics and interactivity, and standard multiple-choice and true/false questions are augmented by drag-and-drop matching exercises and fill-in-the-blank brainteasers. A new quiz is featured twice a month. Do you think you're a radio communications expert? Find out online (www.asf.org/radioquiz) with the new Radio Communication Quiz. Do your students need a quick brush-up on non-towered airport operations or airport lighting? Then have them browse through previous ASF Safety Quizzes ranging in topics from emergency procedures to electrical fires to runway safety. ASF Safety Quizzes (www.asf.org/quiz) are underwritten by the AOPA Insurance Agency, Inc.

Say it right BY MACHTELD SMITH

IF YOU HAVE BEEN SEARCHING FOR A way to help your students overcome “mic fright,” be sure to recommend the AOPA Air Safety Foundation’s interactive online course called *Say It Right: Mastering Radio Communication*.

Built on the foundation of the extremely successful live safety seminar called *Say It Right: Radio Communication in Today’s Airspace*, ASF collaborated with the National Air Traffic Controllers Association (NATCA) in developing this course to help pilots kick bad habits and learn new techniques. Audio examples cover many specific in-flight scenarios, and video advice from

NATCA controllers provide the insight and knowledge your students need to communicate effectively and overcome any bouts of mic fright. To fully benefit from the course, be sure to have your students visit the Ask ATC Web page (www.asf.org/askatc), developed in collaboration with NATCA. Who better to give advice on ATC radio communications than the controllers themselves?

And this course is not just for students. Think you’ve got the jargon down and your radio etiquette is up to snuff? Maybe you



should brush up so your student won’t out-ace you on the next flight! Count on the AOPA Air Safety Foundation to test your CFI mettle with *Say It Right: Mastering Radio Communication* (www.asf.org/courses).

Machteld Smith is a senior aviation technical writer for the AOPA Air Safety Foundation and a multiengine instrument-rated commercial pilot.

New ASF safety seminar

YOU’RE ON SHORT FINAL AT A NON-towered airport when the airplane at the hold-short line suddenly pulls onto the runway. The Unicom crackles to life with

the pilot’s announcement: “Taking the active”—three pointless words high on your pet peeve list. To top things off, you’re now forced to go around because of this oblivious

pilot’s actions. No wonder you’re fuming as you climb back to pattern altitude.

At one time or another, we’ve all been annoyed—even scared—when other pilots don’t play by the book or simply take a cavalier approach toward safety. To be blunt: Some fellow aviators’ faux pas cause us to cringe, wag a finger at them, and shake our heads in disbelief.

Whatever the reason for your discontent, you won’t want to miss the AOPA Air Safety Foundation’s newest free seminar, based on pilots’ feedback about other pilots’ imperfections. They’ve told us about the “helpful” person in the right seat who can’t keep his hands off the controls and the genius whose prop blast creates a hurricane in their hangar every time he taxis by. There are plenty more tales in store at ASF’s *10 Things Other Pilots Do Wrong* safety seminar.

Now is your chance to air your grievances and learn a thing or two about safety. Join ASF for an entertaining and educational look at the things that drive us nuts about “other pilots.”

To participate, go online (www.asf.org/seminars) for confirmed dates and locations in your area.



Déjà vu LEARNING FROM ACCIDENTS

BY HILTON GOLDSTEIN, PH.D.

IT WAS A BEAUTIFUL CALIFORNIA DUSK. My student and I were ready to log his required night cross-country. We would take off from south San Jose, fly over downtown San Francisco, and on to Santa Rosa for dinner. I encouraged his fiancée to come along and enjoy the experience—I promised no stalls, steep turns, or emergency descents. We preflighted one of the flight school’s Piper Warriors and were excited to get going. About the same time, a good friend of mine was departing in a Cessna 172 to meet us in Santa Rosa for dinner.

While going through the “Engine Start” procedure, my student could not pull the primer all the way out to get a full primer stroke. I leaned across from the right seat and pulled the plunger out firmly but slowly. Suddenly the plunger and several inches of cable came loose in my hand. We looked at each other in disbelief. I smelled gas fumes, quickly shut down, and had everyone exit the airplane. Now running late for our dinner rendezvous, I hurried into the FBO, squawked the Warrior, and picked up the keys for another Warrior. I did a quick but thorough preflight. This time everything stayed attached and we taxied to the run-up area—we wouldn’t be too late for our dinner date.

The runup was uneventful. The engine ran fine, but sounded “different.” We taxied onto the runway, the throttle went full forward, and we were rolling. I thought, “Hmmm that’s not right.” The acceleration felt different. Was it because we had the added weight of a passenger? Perhaps the 160-hp Warrior didn’t have the muscle to which I was accustomed in the 180-hp Piper Archer? I thought, “Maybe it’s OK...that’s not right...nah, it’s OK.” This

went on for about five to 10 seconds. I had been there before, seen the accident, and was about to repeat it—writing my own accident report. Except this report was already written and in the NTSB files for everyone to see. I instinctively pulled back the power to idle and applied the brakes. My student looked at me, puzzled. During the taxi back to the FBO I explained how I was not comfortable with the acceleration and that the engine rpm were slightly lower than expected.

This time I preflighted a Cessna 172—we had run out of Warriors—and after speaking with our passenger to allay her growing nervousness we were airborne. We had a fantastic flight, and dinner was great.

The accident occurred on January 13, 1982. A Boeing 737-222, Air Florida Flight 90, ended up in the icy water of the Potomac River

I HAD BEEN THERE BEFORE, SEEN THE ACCIDENT, AND WAS ABOUT TO REPEAT IT...

in Washington, D.C. Seventy-eight people died that day. We can argue the accident’s cause, but it will not bring those people back. They’ll never again go home to their families and kiss their wives, husbands, and kids goodnight.

The NTSB files are filled with avoidable accidents, and in almost all cases, the same type of mistake occurred previously. We should study these reports, learn from them, and store them away in our mind—if not for us or our passengers, then for our families.

Hilton Goldstein, CEO and co-founder of Hilton Software, is a certified flight instructor.

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Cold facts on icing accidents

Learning the ins and outs from aviation's top teachers

A PRELIMINARY TABULATION OF AIRCRAFT icing accidents in the ASF accident database has some chilling numbers proving those accidents too often end up in the fatal column. Initial reports suggest that between 1999 and 2008, there were 99 aircraft icing accidents, which accounted for 96 deaths and 26 serious injuries. Check out ASF's free online course: *Weather Wise: Precipitation and Icing* (www.asf.org/wwprecip). Watch for the release of the *2009 Nall Report* (www.asf.org/nall) to take a close look at accident statistics for 2008.



Safety spotlight CFIs behaving badly

BY DAVID JACK KENNY

THOSE NEW TO IT SOMETIMES overestimate the glamour of primary flight instruction. They may know about the long hours, low pay, unpredictable schedules, old training aircraft, and students who are unprepared or late, but never realize that it also has its down side. Nonpilots and new pilots might find it hard to believe that even teaching stall recoveries and crosswind landings can become pretty humdrum. A few instructors find ways of dealing with the tedium. Some work better than others.

On November 15, 2007, a Piper PA-28R-200 Arrow broke up in flight more than 10,000 feet above central Texas. The airplane had left Arlington Municipal a little before 2 p.m. on a 132-nm cross-country to Abilene Regional. On board were a 600-hour CFI, one student who held a foreign private pilot certificate, and a primary student riding as the back-seat passenger. The flight's purpose was to build time for the foreign pilot and give the back-seat student more radio communications experience.

Radar data showed the Arrow flying a series of unexpected maneuvers for a routine cross-country flight. Five times the aircraft climbed to altitudes between 11,000 and 12,300 msl, then suddenly pitched down and accelerated to 120 KCAS or more before climbing rapidly for 300 or 400 feet, slowing, and leveling off. The fifth time,

its airspeed passed 134 KCAS, decreasing briefly just before radar contact was lost. Maneuvering speed for this model is 116 KCAS.

Six major sections of wreckage were found scattered across a half-mile of cactus and scrub oak. The 34-year old airplane had more than 7,250 hours on the airframe. Examination of the fracture surfaces suggested overload, the left wing twisting and bending until the prop gouged the skin and the right wing failing in the opposite direction.

Several colleagues and students spoke highly of the instructor's skills. One CFI called him the best pilot he'd ever flown with. He'd come a long way in a hurry. In the space of five months, he'd earned multiengine and instrument ratings and his flight instructor's certificate, and then completed new CFI training at the flight school. He was 29 years old, and more than half his total flight time had been logged in the previous 90 days.

Two instructors and one of the accident CFI's students acknowledged that he'd been known to do aerobatics in training aircraft with students on board. The back-seat passenger's principal instructor knew that he sometimes demonstrated spins to primary students, and had also heard accounts of his doing "barrel rolls" in the school's airplanes. At lunch that day, she'd asked him "not to do any funny stuff" with her student on board. The Arrow is not certified for any kind of aerobatics, including spins.

Another CFI recalled having taken the

accident instructor to task for doing "snap rolls" in the trainers. He described the maneuver as pitching the airplane down until it reached 140 knots, then pitching up 10 to 15 degrees and applying left rudder and aileron. A primary student gave a similar description of a "barrel roll" the accident instructor had performed in a Cessna 172SP

FIVE TIMES THE AIRCRAFT CLIMBED TO ALTITUDES BETWEEN 11,000 AND 12,300 MSL, THEN SUDDENLY PITCHED DOWN AND ACCELERATED TO 120 KCAS OR MORE BEFORE CLIMBING RAPIDLY FOR 300 OR 400 FEET, SLOWING, AND LEVELING OFF.

after demonstrating spins. In an e-mail to friends the week before, the back-seat passenger described a "megalomaniac instructor" who had taken the controls and done spins without warning, almost throwing the student out of his seat because his seatbelt wasn't secure. This instructor was never conclusively identified, but the student had flown with the accident CFI the day that e-mail was sent.

The NTSB attributed the accident to "the pilot's intentional performance of aerobatic maneuvers that exceeded the design limits of the airplane structure." It's difficult to see why attempting aerobatics in an uncertified airplane seemed like a good idea, but the pilot's history might provide some hints. He'd worked as a CFI for a little less than four months—maybe long enough for boredom to begin setting in, but not a lot of time in which to absorb a sense of the safety culture if it didn't come naturally. He'd been flying a lot and perhaps the exhilaration of a growing sense of freedom and mastery of the

airplane led him to explore the farther corners of the flight envelope—the compliments of students and fellow instructors probably didn't discourage him.

Still, it's difficult to imagine what went through his mind the first time he decided to roll one of the flight school's trainers.

CFIs can scarcely be blamed for mistakes of their former students, but the instructor's attitude during training sets the standard for the student's outlook thereafter. A flippant approach to safety risks producing pilots who don't believe bad things can happen—until bitter experience intervenes.

David Jack Kenny is manager of aviation safety analysis for the AOPA Air Safety Foundation, an instrument-rated commercial pilot, and owner of a Piper Arrow.

ANOTHER CFI RECALLED HAVING TAKEN THE ACCIDENT INSTRUCTOR TO TASK FOR DOING 'SNAP ROLLS' IN THE TRAINERS.

Chief's corner

Proactive safety education?

BY JJ GREENWAY

THERE ARE CERTAIN INEVITABLE ACCIDENTS that are going to happen in general aviation. The AOPA Air Safety Foundation analyzes every NTSB report as it is released, and after reading enough of these reports, it doesn't take long to see the trends. As much effort as we spend improving safety, the accident rate remains mostly level.

Often, after a high-profile accident, the FAA, NTSB, and industry "alphabet groups" convene, usually with much wringing of hands, and try to smooth over the situation. Through safety education and pilot training an attempt is made to prevent a similar occurrence.

As macabre as it sounds, we can generally predict how many midair collisions will occur, how many non-deiced airplanes will come to grief in icing conditions, how many botched go-arounds will result in loss of control, etc. Take midair collisions, for instance. The typical midair happens within a few miles of a non-towered airport, on a Saturday or Sunday, between 9 a.m. and 5 p.m.

We often feel frustrated at the seeming inevitability of these accidents and wonder if there is more we can do to prevent them. Certainly, safety education works. Look no further at the reduction in automobile accidents involving alcohol brought about by the efforts of MADD (Mothers Against Drunk Driving). More onerous Federal Aviation Regulations don't seem to be the answer, and certainly if they were, they would be met with great resistance. The problem is, we don't always follow the ones we have, let alone all the admonitions contained in the AIM and our POHs.

Many times, our safety message falls on deaf ears. The pilots who need the education the most are not generally the recipients of it. We've found that attendees of the ASF Safety Seminars tend to be a pretty safety-conscious bunch. Maybe we're guilty of a little choir preaching sometimes.

Obviously, the genesis of aviation safety education lies with the CFI; most of all, the CFI working with the primary student. But can we do more? ASF has given consideration to holding safety seminars on accident topics before the accident occurs. Can this be effective? It's hard to convince pilots that something bad is about to happen to them. But, statistically, it will. We're interested in hearing your ideas, from the standpoint of a CFI, on proactive safety education. Write us at asf@aopa.org. Include "Proactive Safety Education" in the subject line. Fly Safe!

JJ Greenway, a CFI since 1980, has given dual instruction in aircraft ranging from the Luscombe 8A to the Boeing 767-300ER.

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Letters to the editor

CFI to CFI

ASF's newsletter for the serious flight instructor

CFI to CFI is intended to provide safety subjects, insights, and tips relevant to CFIs. Now that you've had a chance to get acquainted with the newly formatted newsletter, what do you think? We'd love to hear your first impressions.

Do you like the format? How about the content: Are there special topics you'd like to see covered?

Send your comments to: ASF Editor, CFI to CFI, 421 Aviation Way, Frederick, Maryland 21701, or send e-mail to asf@aopa.org. We welcome your feedback as we plan the editorial lineup for upcoming editions.

Don't forget to look for the next issue in April. Your letter may be featured in this spot!

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