From the Editors of

flight TRAINING

FLIGHT SCHOOL BUSINESS

Flight School Business

SELECTED BY THE EDITORS OF *FLIGHT TRAINING* MAGAZINE

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Flight School Business Table of Contents

Introduction

Teaching someone to fly might be aviation's most noble profession, but owning and operating a flight school is its most selfless. Flight schools are service businesses that live on the passion and good will of their hardworking owners. These are not cash cows with the sole purpose of making a profit. They are a way for people—usually flight instructors—to be involved and give back.

Without that passion many wouldn't survive. These are difficult businesses to run, with significant challenges to overcome. When AOPA began publishing Flight School Business again in 2011 it was for the sole purpose of supporting flight school owners and managers. By offering advice, guidance, and hopefully a few actionable tips every other week in an easy to digest newsletter format, our hope is that you are able to further strengthen and grow your business.

The stories you'll read in this compilation are almost completely unedited from their original publication. Links have been checked, but may change as time goes on. We encourage you to let us know about those, or anything else you think would help make FSB even better.

—Ian J. Twombly
Editor, Flight Training *magazine*
July 2014

Chapter One: Training Trends

Group outings grow businesses

TERRA EVANS

Have you ever noticed that once they've earned their wings, many of our students seem to fly the coop?

Increasing pilot retention is a troubling topic. Why would someone who just spent months, or even years, working toward a pilot certificate just stop flying once he or she had reached the goal? When polled, many new pilots admit that while they may feel elated at no longer being required to have a CFI, they feel trepidation at the realization that the CFI is no longer there for their added sense of security. In fact, some don't feel confident enough in their skills to plan a trip outside of their own home territory, let alone take friends or loved ones into unfamiliar airspace and risk showing their lack of experience.

You've heard of discovery flights for prospective students, but what about offering your new private pilots excursion flights? Much like a field trip for classrooms or adventures for Boy Scouts, these excursion flights expose a new pilot to the real world of general aviation.

Trips can be monthly, seasonally, quarterly, semi-annually—whatever you think would be manageable and marketable for your school's unique situation. Plan trips well ahead of time and include as many aircraft as possible, whether they're from your own fleet or someone else's. Some pilots may choose to go on the trip using their own aircraft or one from their flying club, so pricing would obviously be adjusted based on whatever services you are providing.

Since these are primarily instructional trips, there should be two participating pilots per aircraft to split legs, and one of your CFIs present in the right seat of each aircraft as well. Too many airplanes and not enough CFIs? If it's not possible to schedule another trip soon or the destination event is limited, then consider working cooperatively with another local flight school to make it a community event.

When planning excursion trips, they should be specifically designed to challenge a new pilot's comfort level, placing them in an environment where they can use their new skills on practical applications, while still acquiring new skills to build their confidence.

You may want to start out simply, such as a one-day trip to an aviation museum, airshow, aviation-related seminar, or to tour an ATC facility. Further trips may include overnight events, such as a special NFL game, theme parks, or theatre productions.

When possible, a multi-day trip should be planned to another country, such as Canada. This experience will help your pilots understand the process of clearing Customs and Border Protection, and it will help them obtain their radio operator's license and other documents. Varying levels of experience also can dictate destinations, as could aircraft type.

Organizing all-inclusive packages is paramount to the success of building your excursion flights program. Contact the FBO at the destination airport, most will be happy to make the hotel and ground transportation arrangements for you, often at their negotiated discount rates. Some FBOs and hotels have courtesy vans to transport your group so no car rentals or taxis are necessary. You might even get a group fuel discount.

Advertising for these excursion trips should include all local airports, not just your own. Create excitement, get people talking about how much fun it will be, the camaraderie it will build, and how space is limited. Send emails to everyone in your database, expand the information on your website, submit to all airport newsletters; post flyers in and around all airport facilities, local college bulletin boards, and aviation-related and local news releases (ask to be interviewed about the upcoming event). If you are a member of AOPA, you can add an aviation event to the calendar on their homepage. Don't forget to follow-up with the newspapers, providing pictures of the event with lots of happy pilots; better yet—offer to take a high-profile reporter along on a trip.

Excursion trips get people excited about flying, gives them more confidence in their skills and abilities, and can inspire them to continue their flight training beyond their private pilot certificate. Flight schools will not only gain priceless positive public exposure for the events, but should see increased rentals, and a recommitment of pilots to further their training with additional ratings.

When the FAA comes knocking

TERRA EVANS

Nothing is quite as jolting and dreadful to a pilot as getting an unexpected letter from the FAA. Most pilots know receiving a letter from the FAA isn't good news. If the FAA believes a pilot has violated one or more of the federal aviation regulations, that

pilot will receive a letter of investigation (LOI), by both regular mail and certified or registered mail, advising him he is being investigated for an alleged violation of the FARs. Sometimes, the letter is actually hand-delivered by the aviation safety inspector (ASI), which can be very intimidating and embarrassing.

The LOI will usually say something such as "the FAA is investigating an incident that occurred" and that it was "contrary to federal aviation regulations," but it will not explain the specific FARs the agency is alleging were violated. To make matters even more confusing for the airman, the FAA inspectors are advised *not* to list the regulations violated in the LOI since their legal counsel don't want any specific regulations cited before they've gathered all pertinent evidence. Ironically, although the LOI doesn't actually tell the airman why he's being investigated, it will invite the recipient to discuss the matter with the ASI, submit a written statement that includes all pertinent facts and details that may have a bearing on the conduct that is under investigation, and provide any evidence as well.

Just knowing the FAA has him in their sights can put tremendous stress on even the coolest of pilots, which may unfortunately compel him to act impulsively and without the assistance of a legal advisor. To add to the pressure is the fact that the LOI purposely tries to imply that if the ASI doesn't hear from him within 10 days, then the report will be processed without the benefit of the airman's statement. Also, if the letter happens to be hand-delivered or the ASI calls the pilot, often he feels as if he is required to speak with him and answer questions, even though that's not the case. Here are some guidelines and tips for dealing with an LOI:

- No response is actually required.
- Sending an explanation for an LOI rarely ends well for the airman; anything he says could inadvertently disclose additional information to help the FAA's case and will be used against the airman, or your school, later.
- A response should only be sent in certain circumstances, such as mistaken identity, or solid evidence that will clearly prove that erroneous information was the basis for the investigation. Prior to any response, it's highly recommended the airman get legal advice to ensure that such information will likely force the ASI to close out the investigation.
- Airmen shouldn't ignore the LOI; it may compel the ASI to become more aggressive in the investigation. They should instead send an acknowledgement that they've received the LOI, noting that they don't have anything to add at this time; they may also choose to state that they'd be glad to respond to any specific questions or requests in writing that the ASI may have. This will demonstrate courtesy and professionalism, and a cooperative attitude.
- Before speaking with anyone at the FAA or responding to the LOI, the pilot should contact an aviation attorney who can help prepare a response that

may mitigate damage, minimize investigation, and that will avoid providing admissions or other evidence that could later be used against him. This can be costly, but saving an airman's license may depend on legal intervention.
- Encourage your staff and students to take advantage of AOPA's Legal Services Plan. For less than $40 they can have access to virtually unlimited free legal advice; like insurance, members must have the plan in place prior to an incident for it to be covered.

If you have a company manual, you may want to include a section pertaining to this topic, as well as incorporating it into student training. Just like an emergency checklist, knowing where to quickly find the information can minimize a stressful situation. It is important that your staff and students communicate with you immediately upon receipt of an LOI, not only so you are able to assist them, but also so you have more control of the information to ensure you keep the FAA's scope from potentially honing in on your school.

Selling the gift of flight: Make it as easy as point and click

DOROTHY SCHICK

Flight gift certificates are the most common and easy-to-sell gift certificates flight schools have to offer. Holidays are an especially busy time for selling gift certificates, but birthdays, anniversaries, and graduations don't have a season. In today's e-commerce world, prospective buyers want to be able to find, compare, and make their gift certificate purchases online—24 hours a day, seven days a week. If your school is still making shoppers call you to purchase gift certificates, you're absolutely missing sales.

Selling gift certificates online isn't complicated but there are some Internet security protocols that need to be followed. To start, your business needs an Internet merchant account, which is similar to other credit card processing account services.

When a shopper buys something online the transaction is routed through your Internet merchant account to a payment gateway, which verifies the buyer's funds,

then back to your merchant account, and eventually on to your business's bank account. Of course, most of this process happens in a matter of seconds.

To be sure credit card information is handled securely, Payment Card Industry (PCI) Data Security Standards must be upheld on your website or by pushing the shopper to a PCI-compliant third party vendor's website.

PayPal and Google Wallet are two well-known payment service vendors that offer businesses Internet merchant accounts and other business e-commerce solutions. They make it possible for shoppers to go seamlessly from your website to their secure servers where the shopper enters their payment information, funds are authorized, you are notified of a sale, and then the funds are transferred (usually within 24 to 48 hours) to your account. Since many shoppers already have personal accounts with these or other similar e-commerce companies, they trust them, which means both you and your customer will feel confident that their purchases are being handled securely.

If you are already accepting credit cards your current merchant account provider may also be able to offer an online merchant account solution to you; however it is well worth the time to research Internet merchant account vendors since card fees, monthly statement fees, payment gateway account fees, and transaction fees vary considerably.

Shopping cart software is the software that creates the look and functionality of an online (Web) store, and is another option for selling products online. Shopping cart software comes in a variety of implementation options. Some shopping cart software is hosted on the vendor's secure servers and the vendor charges monthly or annual usage fees in addition to card fees. Web store software can also be purchased to reside on your server or your Web hosting company's server. Most shopping cart vendors offer some limited trial usage of their product so you can test it. Whatever option you chose, take your time in comparing monthly fees, and testing out the shopping cart software to be sure it isn't difficult to use and has a method for you to offer gift certificates.

Selling online gives you both the opportunity and the necessity for creating vibrant descriptions of your flights. Think about who is buying gift certificates. Nine out of 10 times it's a spouse or other family member who is making the purchase. It is likely that the person they are buying for has always wanted to fly. This purchase is a very special gift for both the giver and the receiver. When writing your descriptions don't get hung up on aviation's obsession with the Hobbs meter. Words are tools. A "one-hour" flight lesson sounds and looks more impressive than a 60-minute flight, even though they are exactly the same amount of time.

Always assume your prospective buyer will compare your offer with that of your competitors. The price is rarely as important as the "what." What will they get to do? They get to fly the airplane—really, you need to tell them that! Is there a preflight

briefing? If so, what does it entail? Buyers are well aware that they "get what they pay for"; if your price is higher than your competitors, substantiate your program's values, benefits, and fun factor!

How will you deliver your gift certificates after they are purchased? Most shoppers don't mind receiving their gift certificate as a PDF attachment in an email. The buyer's email address is always collected with online purchases; however you'll want to ask for the gift recipient's name and email address too.

A word about the look of the gift certificate: It is a representation of your business, so be sure it's a good quality design and easy for the customer to print. It should also include your company's fine-print policies, along with all relevant contact information.

Ensure your website makes it easy for shoppers to find your flight gift certificates and be sure you test all navigation links before going live. Nothing is more frustrating or lethal to a sale then a link that goes nowhere.

Now, blast the news that you offer gift certificates online out to your social media network and in newsletters. You can do this several times a year, ahead of and during the peak holiday season, and then periodically at other times of the year.

Flight gift certificates are as wonderful to give as they are to receive. They make awesome birthday, anniversary, and graduation presents. By selling gift certificates online you'll reap the benefits of increasing sales and you'll make it easy for shoppers to point, click, and give the amazing gift of flight to someone they love.

Got syllabus?

IAN J. TWOMBLY

Of the many lessons that came from AOPA's research report The Flight Training Experience, perhaps the most surprising gap between expectation and performance was in the use of a proper syllabus.

This turns out to be a good news/bad news scenario. The bad news: Students are largely unaware of their own progress in the context of the entire flight training experience, there are implications that students feel ripped off, and there is a general lack of organization in flight training. The good news: Of all the problems and challenges, this is probably the easiest and cheapest to fix.

The research report was very clear on this subject. When respondents were asked which issue was most important, they ranked having a good syllabus and following it first--well ahead of cost, customer service, and professionalism of the flight instructor. That's quite a powerful document. The message continued at the recent Society of Aviation and Flight Educators Inc. (SAFE) Symposium in Atlanta, where the flight instructors who gathered concluded that the industry doesn't properly use syllabi in the curriculum.

As a result of these reports and recommendations, several companies now offer their syllabi for free to anyone who wants them. These documents include:

- Doug Stewart's sport pilot training syllabus
- Sporty's Academy recreational pilot training course outline
- Scott O'Brien's private pilot syllabus
- Various ASA syllabi
- Various syllabi and checkride checklists from Qref

There's little doubt as to the efficacy of a good syllabus. That's why the FAA requires that a detailed one be put in place before granting a flight school Part 141 approval. But a lack of Part 141 approval shouldn't be a reason for a Part 61 school to skip the syllabus. It can have many benefits, including:

- **Better standardization of both students and instructors.** If an instructor has to cancel, another instructor can pick up the lesson and teach it without interruption if he knows where the student is in the program.
- **Lower costs for the student.** Students are always looking to save money, and there's nothing more annoying to them than feeling like they are spinning their wheels. With a syllabus, they can monitor their own progress and become more efficient as a result.
- **Transparency.** Whether we like to admit it or not, there are definitely times when students believe they are being ripped off. A syllabus puts everyone on the same page and allows both instructors and students to defend their decisions. This is especially true when the syllabus has completion standards for each lesson.
- **Documentation.** If the worst happens and the FAA comes calling, having a syllabus that details exactly what, when, where, and who will go a long way toward proving your school acted responsibly.

With these and many other benefits, there's no reason not to take a free resource and put it in place. The argument that a syllabus is inflexible for variables such as weather delays and equipment failures is just not valid if the syllabus is properly developed.

Give customers the 411

IAN J. TWOMBLY

How many times have you read a menu in a restaurant and under the price column it says, "Depends?" The concept of not knowing how much something is going to cost before we make a buying decision is unusual, to say the least. But for most flight schools, that's exactly what we're trying to sell. And don't think the problem occurs elsewhere in adult education because taking a college course, or learning to ride a motorcycle or scuba dive all have set pricing. In flight training, then, we stand almost entirely alone.

The problem starts when we have the price conversation with a potential student. "How much does it cost to learn to fly?" they ask. "That depends," is the answer if you're like most flight school owners and managers. And for many people, the conversation stops there. Many people budget everything very carefully in life, and not being able to do that in flight training could be a deal breaker.

Although one solution is to establish a guaranteed fixed rate, such as Redbird has done at its Skyport in San Marcos, Texas, or bigger schools such as ATP do for its courses, many smaller outfits don't think they can afford the liability of taking a slow student through the process. Have one or two of those a year and you could be sitting in a big hole.

The answer for most people is information. In AOPA's study into the ideal flight training experience, a category defined as "information sharing" came through as very important to the students, lapsed students, and certificated pilots involved in the focus groups and phone research. In fact, it factored as more important than scheduling, quality aircraft, organized lessons, test preparation help, community, and recognition.

The good news is that of all the major categories, information sharing came out with the highest performance score. The bad news is that the score was only 6.57 out of 10. Although many lessons can be learned from this category, a few key things stood out—student success rate, realistic estimate of time and costs, references, and disclosure of CFI experience. When you put it all together, the conversation about time and costs is fed with student success rate and references, and CFI experience to make one picture of the value the customer will hope to receive from the school, not unlike the description on the restaurant menu of the dish and the chef's pedigree.

It's easier to find success in the money conversation if you follow a few simple steps.

- Have a conversation in the first place. Don't leave this up to CFIs or the front desk staff. They can provide some information, but it's up to you as the leader of the school, and thus the sales process, to sit down with your prospects and explain the process.
- Provide a range. Feel free to tell the customer how much things would cost at the FAA minimum, but be sure your next statement explains how few people ever actually hit that minimum. It may not be a bad idea to show a worst-case scenario as well.
- Show it on paper. Make a sheet that lists the costs, provides a range, and then breaks it down into manageable chunks. Further down, list the strategies the student can employ to keep costs down, such as flying often, doing home study, etc. You can increase the credibility of this section by including quotes from students who have used these strategies to their advantage.
- Provide references. On the reverse side, provide references of successful students so your potential customer can reach out and talk about costs. This is also a way to connect pilots, and community was another factor in the study that was shown to increase success.

Finally, think about making a fixed-price course. It can be a scary prospect, but many schools have tremendous success, in part because customers are comforted with the idea of a set budget.

Where are your students?

IAN J. TWOMBLY

Situational awareness is a key skill whether flying an airplane or running a business. In the air, it's vital to know where you are and where you're going. In business, especially the business of flight training, it's vital to know where your customers are.

Too often we leave student progress completely up to our flight instructors. If they succeed, we succeed. If they fail, we fail. Instead of leaving your school up to your instructor corps, take control and ensure that each of your students is successful.

Thankfully, there is one technique that will ensure this happens, and implementing it is quick and easy. Although it may seem counterproductive, establish a meeting.

Require your flight instructors to come to a weekly session where the only order of business is an update on the progress of each of their students. To make this as effective as possible, set some ground rules.

1. Keep it brief. No one likes death by meetings. Keep things running quickly and efficiently. Schedule it for half an hour. Make that timeline by requiring everyone to be prepared in advance to brief the group.
2. Keep it positive. Don't tolerate snarky comments or negative feedback. Instead, get the double bonus of staff development by encouraging the CFIs to help each other. It's likely that another CFI has experienced the problem. Encourage dialogue and feedback for a shared learning experience that brings up morale and sets a culture of constant improvement.
3. Keep it focused. This isn't a time to recount last night's pub crawl or concert outing. It is, however, a time to quickly, but thoroughly, get a status on every student in the school.
4. Keep it accountable. The primary benefit of the meeting is to make sure you are aware of the problems and work to fix them. Don't waste everyone's time by not following up. Make sure to support your CFIs and students by offering to fix the issues as soon as possible.

Although adding a meeting to everyone's schedule can seem to be the exact opposite of progress, there is power in knowing exactly where your students are in the curriculum. Not only does it offer you a chance to make sure no one drops through the cracks, it gives you a way to engage them when you see them at the school, and it connects your instructors in a positive learning environment that values learning and feedback.

Checklist for hiring flight instructors

TERRA EVANS

Checklists are necessary and vital tools for your aircraft, but did you know that by developing a checklist to keep track of your recruiting efforts you can easily systematize the process?

While our unique and specialized industry usually means that following a cookie-cutter plan isn't always feasible, by holding a recruit planning meeting with your school's hiring manager, chief pilot, and top CFIs, you should be able to easily tailor this basic guideline to fit your own particular needs, personalities, and skill set.

Try this checklist for hiring flight instructors.

NEEDS—The first step is to develop a list of your school's needs and requirements for the position.

- Determine how many CFIs your current workload supports.
- Primary criteria: Develop and prioritize the key requirements needed for the position, such as ratings, availability, and any other special qualifications, traits, and characteristics that you cannot settle for or do without.
- Secondary criteria: These are the wish-list criteria specific to your operation that could make all the difference in student attrition and growth rates. Try considering the diversity of students who propose specific challenges to your current crew (i.e. cultural diversity or specific language skills, comfort level of students with male vs. female CFIs, specific physical characteristics that may require a smaller/larger statured CFI due to weight/balance or comfort issues in the cockpit).
    - *TIP:* If discrimination laws impair your ability to hire the specific types of CFIs you need, you may be able to avoid such issues and still get what you need by recruiting an independent contractor CFI instead. Review legal hiring practices at EEOC.

SALARY—Offer appropriate compensation to ensure you are attracting and retaining the best possible talent. The National Business Aviation Association has a helpful tool for salary evaluation criteria. If you are a member, you can review the latest NBAA Compensation & Benchmark Survey, or you may want to review Salary.com, which is available at no cost.

ADVERTISING—Get the word out in your local area, online, and by word of mouth.

- Use a bulletin board in the school's common areas and around your airport and other local airports to post the position.
- Email all company staff that a position has been posted. Make sure to post the ad on your company website under a "Careers" link.
- Email or call prior students who displayed the types of traits and work ethic in training you are looking for in an employee.
- Spread the word in the businesses at your airport and surrounding-area airports; make sure you let the crew in your tower know as well. Many controllers are pilots and CFIs.
- Post jobs to online social media sites such as Twitter and Facebook. Ask your employees to publicize the position through their online social media networks.
- Posting ads on professional association websites can be effective but expensive, so try posting to sites like Will Fly for Food and Find A Pilot, which can reach thousands of pilots, create a diverse candidate pool, and best of all is free to you.

PRE-SCREEN APPLICANTS—A short phone call can save hours of your time and help you weed out non-prospects. In 15 minutes you can usually determine whether a candidate has the primary requirements you need, screen them to see which applicants expect a salary that is out of your budget, and generally gain a sense about the person's overall fit to your operation.

- Prioritize which candidates will be on your first-round pick list by devising a Job Candidate Evaluation Checklist that looks something like this:
  - Education/training
  - Work experience/review of logbook
  - Skills (technical)
  - Instruction history
  - Leadership skills
  - Interpersonal skills
  - Secondary criteria wish list

- Using this form to evaluate applications and resumes will help you select the candidates who most closely fit your list of primary and secondary criteria.
- Send postcards or emails to your second-round pick applicants to acknowledge receipt of their resume. If the candidate appears to be a good match for the position, you will contact him or her to schedule an interview. If not, you will keep the application and resume on file for a year in case other opportunities arise.

INTERVIEWS—Make sure that any interviewer of applicants understands and adheres to legal practices. If an interviewee feels he or she has been denied a job because of discrimination, he or she can file a lawsuit with the EEOC.

- Prepare your applicants for the interview by describing the company, the details of the position, and the background and titles of the interviewers.
- During an interview candidates tell you what they think you want to hear. While it's often easy to get sidetracked and caught up in the prospect's personality, charm, and eagerness, be friendly but professional about the primary criteria you must fill by sticking to your job candidate evaluation checklist.
- Once out of the office hot seat and around aircraft, most candidates will relax and drop some of their guard. This can either help to elicit their passion and excitement for instruction or help expose their weaknesses. Walk the candidates through the hangar, show them the aircraft, engage them in conversation, and listen closely to their comments and stories about their aviation history, students they've taught, and aspirations in aviation.
- A large study at the University of Michigan showed that a traditional interview only assisted in selecting top candidates by 2 percent, so once you've determined that a candidate truly fits the profile, you may want your chief pilot to conduct a practical interview of his or her instruction skills as well.

HIRING—Remember that you're not only hiring for your present needs, but for your future vision. Longevity is not ordinarily our primary focus when selecting a CFI, as we all know that most are using us as a bridge to the airlines. By using a careful selection process, you will be able to pick out those with good intentions to promote general aviation, build strong aviation alliances, and who will serve your school well while they are a representative for you. In order to attract and retain professional CFIs who are not aspiring to Flight Level 350, you may consider employing them, which means offering benefits, such as health insurance and retirement, while offering contracted-only positions to the "time builders."

- Build a candidate pool with several candidates who meet your criteria. Remember, if you don't have to make a choice among several qualified candidates, your pool is too small.
- Don't count on your conversational skills to choose between candidates. At the very least, you should rely on your job candidate evaluation checklist, the review of their practical flight skills (if performed), and a background check.
- Don't settle for someone if you don't have the right person with the skills and experience you need. It's better to reopen your search.
- Once you've made your hiring decision, make a written job offer that includes the job description and salary.

The hiring road is long and fraught with potential problems, but proper use of tools such as the checklist will help you on your way.

Five strategies to find and keep good instructors

JASON BLAIR

Finding and keeping good flight instructors has always been a challenge, and with aggressive hiring by airlines that are experiencing shortages of pilot candidates, that challenge is becoming greater. Flight training providers need instructors to keep their customers training (and their business generating revenue). In a competitive hiring environment, there are a few things a flight training provider can do to attract and keep good instructors.

Reward them (monetarily)—The first and most obvious tactic that most businesses consider is paying instructors more than other providers. This is an option, and flight training providers that pay at a higher scale actually force their instructors to have to consider carefully leaving a good paying instruction job to move on to an airline, which may result in a significant pay reduction (especially for their first few years).

Keep them busy—One mistake many flight training providers make is they hire too many flight instructors. That sounds impossible, but it's a problem. Isn't it good to have enough instructors that there is always one available if a customer wants to fly? Well, kind of, but not always. When flight instructors only get a few hours a week because they are competing against too many other instructors for too few students, they don't make enough money or gain enough flight time to keep them happy. This means they will leave to take jobs at places that will better serve their monetary or experience goals. Even in places with a good instructor/student ratio, the weather can be a factor in this (think winter in northern states) causing instructors to leave for places with better weather (and more flying). This is a good opportunity to help supplement their income by paying them for other functions such as working the line, helping with office work, or developing training materials or content to use with students at the school. An underutilized instructor who is bored will leave. The

transition of instructors is costly to the business and hard on the learning process for customers.

Offer medical benefits—Like other industries, training providers that can offer compensation packages that include medical benefits may be able to attract and keep instructors more easily. The cost of medical benefits for individuals (and more so for staff that have families) can be a significant factor in their employment decisions. While younger instructors who typically have fewer medical concerns and may not even choose to purchase insurance on their own may be less motivated by medical benefits, instructors with families or who are middle aged or older may strongly consider this as a reason to work for a company.

Help them reach career goals—When most instructors start working, they have basic single-engine privileges. If their goal is to fly in commercial or corporate operations they will likely need to gain multiengine experience. If your business has multiengine aircraft, consider rewarding staff instructors with "bump-up" ratings for multiengine, instructor, or ATP certificates as they reach set milestones in working for your company. This could be a "free rating" every 1,000 hours of instruction or on annual anniversaries of work to name only a couple examples. Get creative. Have a tailwheel aircraft? Offer them a tailwheel endorsement. Many instructors don't have high-performance endorsements; help them get one. How about buying them an introductory lesson in a helicopter? Maybe sending them to training on a new avionics package would not only help them gain experience but also allow your business to have a trained professional whose services you can advertise to customers.

Provide housing—This may be a little outside the box from what most providers are used to, but attracting instructors may require you to have instructors move to your city. The costs of moving and the challenge of living in a city for undetermined periods of time can be a challenge that dissuades potential instructors from considering working for a company. This could range from a contract with a local apartment complex that provides furnished apartments to owning a house where multiple instructors might live. This is probably not a great solution for a local FBO that only employs one or two instructors, but for larger training providers with multiple instructors on staff it might be a way to attract and keep employees.

We know that not all instructors will stay around forever. Helping these instructors move on can keep them around a little longer if you are helping them meet their ultimate career goals while they are with you. When providing these types of benefits, it may be perfectly reasonable to ask them to sign a work contract that would require payback of expenses for these benefits if they leave early.

In a competitive hiring environment for flight instructors, a little creativity goes a long way. For minimal additional expenses, it is possible for a flight training provider to have a leg up on the competition that just pays instructors an hourly wage when

they are actually flying with a customer. These are just a few ways that might help. What other ones have you seen or might you recommend?

A rainy day solution

JAMIE BECKETT

It's inevitable. The circumstances may vary, but the outcome is inescapable. There will be a day in the not-too-distant future when your employees find themselves sitting on their hands because they have nothing to do. At least they think there is nothing to do. Maybe there are a couple cross-country flights out and there's nothing else on the schedule for a couple hours. Perhaps the weather turns inclement for a bit and keeps the casual passerby from wandering through your door. Or maybe it's just a Tuesday afternoon when things normally get slow.

As the manager of the facility the duty to find productive work for your staff to engage in falls to you. And that is the key. Productive work, not just busy work. Assigning tasks for no reason other than to have moving bodies in the vicinity of your office is counter-productive. It induces irritation and tends to cause employees to become disgruntled. Disgruntled workers lead to poor customer service and high employee turnover. We want to inspire loyalty, dedication, and a drive to contribute in a meaningful way to your business.

Rather than assigning specific tasks to your employees during these down periods, why not challenge them instead? Let them use their best initiative to impress you. Make it clear that you're willing to let them stretch out and try new things during the lulls that invariably happen at a flight training business. Their creativity may surprise you. It might even bring you rewards you never thought possible.

You'll find talents and insights from your employees you never knew they had. One might create a new logo that blows away your old one, while another may design a spreadsheet that helps streamline your operation and cut costs. It may turn out that you have a lineboy who enjoys calling former students to encourage them to come back for a bit of dual, while your counter staff may surprise you with a marketing campaign that uses social networking at a cost of pennies yet yields real results.

On your own you might have never thought of any of it, but the odds are good your staff knows a thing or two they can do to ratchet up your business. Let them loose to

use their imagination when the circumstances permit. You just might be surprised by the results.

To up the ante a bit, you can use simple, inexpensive incentives to get your crew thinking on a full-time basis about how they can make a bigger impact on the dark days when nothing is going on. Kicking in to buy pizza as a surprise perk for the effort is a good first step. Creating a monthly or quarterly title of Top Contributor for the employee who dazzles you most, and gifting them with a pair of movie tickets or a gift certificate to a local restaurant, could be the boost your crew needs to really kick into high gear and make the most of their down time. Post their name in view of the public, and you'll see their competitive spirits soar while their desire to impress you in new ways becomes contagious.

Use your own creativity when considering incentives for your troops. But don't forget to make good use of the least expensive incentive you can offer. Offer a sincere "Thank you" to every employee who participates, and do it often. Because while they're jockeying over who wins the big prize each month, you're a winner every time those newly motivated employees walk through your door, flip the lights on, and prepare to serve your customers with a big smile and a well-earned sense of accomplishment.

What can a lemonade stand teach us about profit?

DOROTHY SCHICK

When I was 7 I decided to have a lemonade stand. In those days Tang was the official national kid drink so Mom dutifully purchased some pre-made crystalline stuff that came in packages with simple directions: "just add water." Little did I know that I was about have my first business lesson.

The lesson began when big brother Rob; who was four years older, and many, many times smarter, stuck his nose into my room to offer his advice. "How much are you going to sell it for?" he asked. I'm sure I pinched my face, gave him my best get-out-of-my-room stare and smugly told him some very large number, like 5 cents. "So, how are you going to make a profit with that?" He left no doubt by his inflection of "that,"

that I was dumber than a board. "Well," I said defiantly, "*I don't want to make a profit, I just want to make money*." If getting him out of my room was my goal that did the trick because he didn't want anything more to do with me. But as soon as he was out of sight, I looked up "profit" in the dictionary. I never admitted this to my brother, but his admonishment, along with help from mom, made my one-day lemonade stand a big success even though I ended up drinking most of the profits myself.

How many times do we grownups conjure up all the ingredients we need to set up our runway lemonade shops, only to find out we didn't figure out one critical goal—how to make a profit?

As I learned, making money is not the same as making a profit—just ask some of the failed dotcom CEOs. Making more money than you spend is making a profit. I don't want to sound too spiritual here but there are three profits: gross profit, net profit, and retained profit. Gross profit is the excess revenue after you deduct the costs that can be attributed directly to the product or service, (cost of goods sold). Net profit is the difference between the gross profit and other operating expenses (operating expenses are the general business expenses that cannot be directly attributed a product or service). Retained profit is surplus—think of it as a savings plan. You want all profits to be positive.

How much do you want to pay yourself?

How much net profit do you want the business to generate each year?

How much will it cost to produce that profit?

How much sales revenue is necessary to support both the profit and the costs?

Let's say you work for yourself and by some good fortune you own one airplane free and clear. We'll call you "CFI Corp." You want to see a $45,000 a year net profit. How many rental and instructional hours does CFI Corp need to sell in order to make that profit?

You've decide to rent your airplane for $85 an hour and have figured out that for every hour you rent the airplane it will cost you $52 an hour (fuel, oil, maintenance, and so on). Your flight instruction fee is $45 an hour but you have to pay self-employment tax of thirty-three percent, so you only net $30 an hour of that fee. In addition, you'll have other monthly expenses of $1,000 (phone, office rent, airport liability insurance, utilities, iPad apps, etc.). How many billable hours will you need to rent the airplane and to instruct in order to make your goal of $45,000 a year net profit?

Sales = Total Cost + Profit

Here's the rewritten equation using X for the unknown hours.

($85X + $45X) = ($52X +$15X) + $12,000 (total annual expenses) + $45,000 (desired profit)

130X= 67X + 57,000

130X - 67X = 57,000

63X = 57,000

X = 57,000/63

X= 905 billable hours per year

Now, before I get a bunch of emails about all the problems with this equation, let's be clear: It's an over simplification to be sure. We don't live in a perfect aviation world where all the stars line up nice and pretty. Expenses mostly go up, even without billable hours going up—just ask someone who has to comply with an unexpected mandatory AD. It may not be possible due to competition or other factors to increase you sales price. Are you willing and able to make a smaller profit?

A common mistake of inexperienced professionals is to work more hours than they get paid for. This is particularly true for flight instructors because of the nature of our industry: preparing lesson plans before customers arrive, talking with a customer about a new airplane, and answering emails may not be billable—yet no one disputes that work is being done. Flight schools can also take advantage of the fact that inexperienced flight instructors are willing to accept less pay for flight hours.

Is there another way? Perhaps. Some in our industry are advocating for a flat-rate pilot training course fee structure. Assuming that each person who starts such a course stays through to the end that might not be such a bad idea.

My advice is to sit back and have a nice cool glass of lemonade while playing with the numbers in this equation. Finally, be sure to ask yourself if the selling prices, costs, and hours you come up with pass the common sense test. Are they realistic? Is it doable?

Take the headache out of tax time

DOROTHY SCHICK

I subscribe to the notion that a good approach makes for a good landing. The same is true at tax time, when everything you've done in the previous 12 months can either make tax preparation as smooth as a soft-field landing or as unfavorable as bouncing one. If you have been keeping proper records the task of tax preparation is much less difficult. Like it or not, we need to meet our obligation to Uncle Sam. But that doesn't mean it has to be a painful process. Here are five tips for making tax time easier on

yourself—if not this time around, then use these tips to reduce the pain of doing taxes next year.

Record keeping is fundamental to tax preparation. The essence of your tax liabilities are in the records you keep.

- Use an accounting software program. I wasn't going to add this seemingly obvious tip until I discovered that a busy, independent CFI friend was using a file folder as his "accounting system" because as he said, "I don't want to spend the money on accounting software and I wouldn't know how to use it if I had it anyway." This otherwise intelligent CFI is stressing out about receipts, expenses, and making sure the income he states on his 1040 comes close to matching what will be reported to the IRS on the 1099s he receives. Our lives are stressful enough. Who needs more? If you are serious about being in business for yourself get serious about business record keeping.

Get help with keeping your books—we're pilots, not accountants. Now for some self-disclosure. I *hate* accounting and bookkeeping! Sure, I had to learn basic accounting principles and software, but my primary job is flight instructing. If you feel the same as me then let someone else do bean counting!

- Hire a bookkeeper. If your business is thriving then you probably have a bookkeeper, spouse, or a trusted office manager doing this job already.
- If you can't afford a full-time or part-time employee for the job, consider hiring a bookkeeper just for periodic (monthly or biweekly) on-site visits.
- The minimum you should do each month is ensure that you are recording your income and expenses along with balancing your books against your bank statements.

The bottom line—at tax time having your books in order by making sure your income, expenses, and assets and liabilities have been recorded and categorized correctly reduces your stress and can help your tax preparer decrease your tax liabilities.

Avoid issues with the IRS and the Hobby-Loss Rule. The IRS does not take kindly to people who start a "business" which is really their "hobby" and then attempt to claim expenses and losses on their tax returns. The IRS therefore supplies guidelines as to what qualifies as a business, also known as the Hobby-Loss Rule: Generally, an activity qualifies as a business if it is carried on with the reasonable expectation of earning a profit. The following factors are used as guidelines:

- Does the time and effort put into the activity indicate an intention to make a profit?
- Does the taxpayer depend on income from the activity?

- If there are losses, are they due to circumstances beyond the taxpayer's control or did they occur in the start-up phase of the business?
- Has the taxpayer changed methods of operation to improve profitability?
- Does the taxpayer or his/her advisors have the knowledge needed to carry on the activity as a successful business?
- Has the taxpayer made a profit in similar activities in the past?
- Does the activity make a profit in some years?
- Can the taxpayer expect to make a profit in the future from the appreciation of assets used in the activity?

To avoid having your losses disallowed, work hard to make a profit.

Independence comes with a cost. If you are self-employed (i.e. independent contractor), you are taxed differently than an employee. There are two separate federal taxes applied against your net income: the income tax and the self-employment tax.

- File estimated taxes on time (April 15, June 15, Sept. 15, and Jan. 15)
- Use the IRS form 1040-ES or file electronically using the Electronic Federal Tax Payment System (EFTPS).
- Have separate business and personal checking accounts. Don't mingle personal checking accounts with your business.
- The price of being an independent businessperson is to act like one: Make sure you create invoices or sales receipts for all your customers and keep copies for these records.
- Be sure your employment status really does fit within the IRS definitions for independent contractor and that you are not a common-law employee or statutory employee. If it is determined you have been misclassified and you are an employee, you may have been denied overtime pay or benefits that were owed to you, or paid extra money in taxes.

Depreciate and deduct. Make the most of what you can legally depreciate or the expenses you can deduct.

- Depreciation is an annual income tax deduction that allows you to recover the cost or other basis of certain property *over the time you use the property*. It is an allowance for the wear and tear, deterioration, or obsolescence of the property. An airplane is a good example of property that can be depreciated over time.
- Business expenses are the cost of carrying on a trade or business. These expenses are usually deductible if the business is operated to make a profit. Car mileage, when the vehicle is used for business, is an example of a deductible business expense (with some exceptions). If you use your vehicle for both

personal and business then keep a log sheet or use one of the many smartphone apps to help you maintain a record of your car's personal and business mileage.

Taxes are not going away, so take two Aspirin, tackle what you can yourself, use an accounting system, and seek professional advice for the rest.

Additional Resources:

Small Business and Self-Employed Tax Center

IRS website — Use it. Your taxes paid for it!

Selling the solo

IAN J. TWOMBLY

The flight training community is obsessed with selling private pilot certificates. That may make sense in some cases, but for most students, getting to a minimum of 40 hours and completing three tests can be pretty daunting. The answer is to break the training into easily manageable chunks for the student, starting with solo.

Sporty's Academy in Batavia, Ohio, has mastered this strategy. Traditionally students were steered to a recreational certificate as a means to gain confidence, get valuable pilot-in-command experience, and reach their goal faster. Recently Chief Instructor Eric Radtke and his staff have taken the approach to its logical extension and focused only on the first solo. "Our TCO [training course outline] is the same for private, recreational, and sport pilot," he said. So the transition has been seamless.

Radtke said they found through analysis of their customer base that if the student made it to first solo, they generally stuck around. And since the school has implemented this plan, they've had phenomenal success. "We haven't lost a client post-solo in 18 months," he said. From there the majority of students will make the quick transition to a certificated recreational pilot, and then on to private pilot if they so choose.

Sporty's is having success with a technique that experts say is tried and true. To have success at a big goal, such as flight training, break it down into smaller and more achievable goals. A key to that strategy is celebrating a milestone when it is reached, as Sporty's does with the first solo. Doing otherwise is a wasted opportunity at motivating the student, instructor, and other pre-solo students.

The key to selling the approach is to keep it fluid, Radtke says. “People are looking for a personalized experience at this investment level,” That means if customers comes in and are savvy about the flight training process, Radtke recommends not forcing them to go one route over another. Instead, find out what they want and give it to them. But if a prospect is still undecided or a little less educated on the process, selling a 15-hour flight package that leads to a first solo flight is a powerful tool.

By focusing on shorter-term goals your school has the opportunity to increase motivation, celebrate additional milestones, increase retention, and diversify your product offerings. And all of it can be put in place with some staff training and a fresh look at the curriculum.

It’s not too often that an idea presents such a win for the school and a win for the student.

Help your students avoid missed lessons

TERRA EVANS

Last-minute cancellations are usually impossible to fill, so it’s no wonder why one of the most frustrating situations that flight schools face on a routine basis is the no-show student. With a fortune invested in equipment, payroll, and unrelenting fixed costs, even one missed lesson or rental can wreak havoc on your bottom line.

Diplomacy and tact are paramount to resolving this issue; after all, we’ve already worked so hard to get these students in the door that we don’t want them taking their training bucks elsewhere because we’ve gone off on a rant. Posting a reminder on the wall that “cancellations require a minimum of 24 hours notice” is the most common and conspicuously used tactic. But let’s face it, once the client is out the door, chaotic life happens and even the best of us can get sidetracked.

Research shows that negative reinforcement by professionals, such as charging fees for missed appointments, is far more likely to make a client feel degraded and resentful than remorseful, and is usually the catalyst that deteriorates the relationship.

For example, think of your dentist. Like you, the only way he makes money is if there’s a client sitting in his chair. If you show up early, most likely you’ll be filling

a seat in the waiting room far past your appointed time, but if you forgot your appointment once you'd be charged for it because his time is valuable. Frustrating, isn't it?

Don't put your students in the position of recounting the times they've had to wait on CFIs getting back from overdue lessons, squawks being addressed, fueling, computer issues, or even weather. Instead, try employing the following tried and true techniques to help build the type of program that will maintain a friendly atmosphere. Remember, a healthy camaraderie of give-and-take will get you much further, garner mutual respect, and ensure long-term loyalty.

- Appointment cards: The cheapest form of insurance to get them back on time is a small card with the lesson date and time on it. Get your CFIs or schedulers in the habit of providing one each time. Indicate a spot to be checked next to their name on the schedule showing one was given. These cards can be produced right from your own printer or ordered very inexpensively from places such as Vistaprint.
- Email reminders: Maintain a healthy contact list of all clients and use that system to everyone's advantage.
- Texting reminders: CFIs should check with students to see if they mind receiving text messages; try to use a company-sponsored cell phone, or use a free online service such as Onlinetextmessage.com
- Call: Making personal contact is still the most reliable and personable method, allowing for immediate rescheduling if needed. CFIs can do this between appointments, using it as an added opportunity to remind students what to be prepared for so their head is in the game upon arrival.

While there may be a few who grumble or beg you to stop reminding them, you'll most likely receive praise and thanks from most. After getting to know your students you'll begin to better assess who needs the steady reminders.

If you do encounter that one special client who is consistently late or just generally unreliable despite your best efforts, instead of being critical try a tactical approach in private, such as, "We noticed you've missed appointments. Because your training is important to us, we want to find out how we can help you get here on time in the future. Is there a particular time of day that you prefer? What can we do to help you that we aren't already doing? Could the staff call you with additional reminders?" Or, "If you can't make an appointment, we'd really appreciate it if you can call as soon as possible. That will let us schedule another student in that time, which helps those on the waiting list get their lesson time in too."

Of course, occasionally there will be a student who is just too costly to your operation because he or she misses too many appointments. Fees will never help you recoup your actual losses, so you may need to classify them as "Status Only," meaning

they'll have to call in on the day they absolutely know they can fly to see if there are any openings, and they must be flexible with CFIs. Your staff can call them when last-minute cancellations occur to offer them the time as well. Most will understand and work harder at being consistent if they really want to fly.

Successfully navigate the flight school insurance market

IAN J. TWOMBLY

Despite a market that's become more favorable to flight schools, commercial aircraft insurance can be a drag on a school's bottom line. Understand the underwriter's formula and the ways in which a school can save money start to become clear.

Jon Harden, president of Aviation Insurance Resources, said the basic premium is based on the liability limits, hull value, type of aircraft, and type of use.

- Liability limits: Because liability is the biggest potential payout for the underwriter, having more people on the airplane increases the risk. To that end, a typical four-seat trainer will have a liability premium of around 20 percent more than a two-seat trainer.
- Hull value: Obviously a more expensive aircraft has to be insured for more, and thus costs more in the premium. But it goes beyond straight dollar figures. Harden said a larger fleet can actually cost less per aircraft because the school has more buying power and more leverage.
- Type of aircraft: Just like in personal and recreational aviation insurance coverage, the type of aircraft and the aircraft's accident history have an impact on rate, as does its category and class. Tailwheels cost more, as do seaplanes, twins, and so on. Making sure the aircraft fits the mission is also important. That means using a Bonanza as a primary trainer is probably going to give the company pause.
- Type of use: It may be inconvenient to students and turn away some business, restricting an airplane to dual only or sightseeing and dual only can reduce premiums, although maybe not enough to justify the restriction.

AOPA Insurance Agency President Janet Bressler, adds that loss history, location, and even experience of your CFIs matter can also matter. Here are other ways to reduce premiums:

- Higher renter minimums: Harden said higher pilot requirements for a rental can save about 10 percent.
- Safety record: Safety pays. Most companies are offering a claims-free discount.
- Using the right broker: More than anything else, both Bressler and Harden said that it pays to go to an insurance agency that specializes in aviation. Because aviation has become a market-based, and not underwriter-based, Harden said aviation brokers know the limited number of brokers and can work to get the best deal. He recommends finding a broker you trust in aviation and going with that company.
- Get personal: Bressler said it helps for the broker and underwriter to have a good idea of the safety culture at your school. "Insist on a face-to-face ongoing relationship with your insurance company (in collaboration with your broker) – invite them out for a site visit – educate them and show off all the safety-minded aspects and quality controls throughout your operations," she said.
- Get organized: Standardized checkouts, rental agreements, additional currency requirements, and anything else that can be documented helps a school's case, according to Harden. Documentation will help an underwriter in case of a claim, whereas he says they simply have to write a check without it. If you don't think your school is getting a good rate, presenting your case with documentation may be one way to get it down.

Interestingly, one area where buyers think they can traditionally lower premiums is unavailable to flight schools. According to Harden underwriters aren't budging on deductibles, instead simply offering one (usually $1,000 or $2,500) and leaving it closed for negotiation. Bressler counters that some wiggle room may be available, but it's unlikely to save the school money in the long run.

Shopping around is another traditionally smart way to save money that won't help you much in commercial aviation insurance. The aviation underwriters will only quote a policy to one broker at a time, effectively locking out other brokers unless you release them. That means not only will you likely not get a better rate by shopping aviation brokers, Harden says it may hurt you if the underwriters see you jumping from broker to broker in an effort to save money. Recognizing it's his business, Harden says the best thing to do is simply pick the broker that gives you the best service and who you think will get you the best deal and let them work through the range of underwriters.

Just one more question

IAN J. TWOMBLY

A pilot who passes his or her checkride is automatically a happy customer, right? It might not be that easy. Just because a student had a successful outcome with your school, it's an automatic bet that he or she was also a happy customer. To know that, you have to ask.

Implementing the survey is the easy part. What you must first decide is what you want to know. Surveys should be used to answer a question or be used as a data to help make a decision to take an action. While you certainly could question ad nauseum about every facet of the training process, you'll get diminishing returns on the quality of and quantity of responses. So before you go any farther, first decide exactly what it is you want to know, and once you do know it, what you will do with the information.

For example, you could ask, "How satisfied were you with the training process?" Knowing that could be helpful for general purposes (or marketing for that matter), but you are going to get a lot more information out of a slightly different question. Instead ask how much they agree, based on a numerical scale of the following: "I received good value for the cost of my training." A poor number here will indicate a root problem of either cost or quality of training. Follow this method throughout your survey to get the best information you can, always questioning yourself on whether or not you can or will act on the answer.

A major consideration of any survey is length. Too long and the response rate and quality will taper off significantly. Too short and you'll get no useful information. A good rough guide is to write the survey on a blank word processing document. Keep it to once legible page—no six point type allowed. If you want more information, survey more often. In fact, it could be very useful to survey right before or after a stage check to compare the answers with those right after a checkride.

Your best answers, however, will likely come from those students who have dropped out. Getting them to be candid could bring a wealth of information about where your school is falling short. Any true scientific survey would have to include this population of students, but more importantly, you want information that will help you improve.

Getting to the lapsed students could be difficult, but you should have an email and physical address for each. The choice of paper or electronic is still undecided amongst survey experts. Each has an inherent bias. Electronic users are typically

younger. Physical users typically older. You'll get more responses with an electronic survey (Google free online survey providers), and crunching the results will be easier. But a handshake with an envelope containing a survey to your new pilot presents a good opportunity for a final connection. You could also mail the survey a month or so after the student is finished, including a coupon for 15 percent off pilot supplies, a free hour of ground in your G1000-equipped airplane, or a free syllabus and study guide to the instrument rating course. Either way, don't miss the opportunity to reconnect with your students.

Individual surveys constitute a fixed point in time, but the survey process should be ongoing. If you made changes as a result of a previous survey, make sure to let your customers know. They'll appreciate that you listen to their input. And resurvey some point in the future to make sure your changes are working.

Recent experience a major factor in checkride success

JASON BLAIR

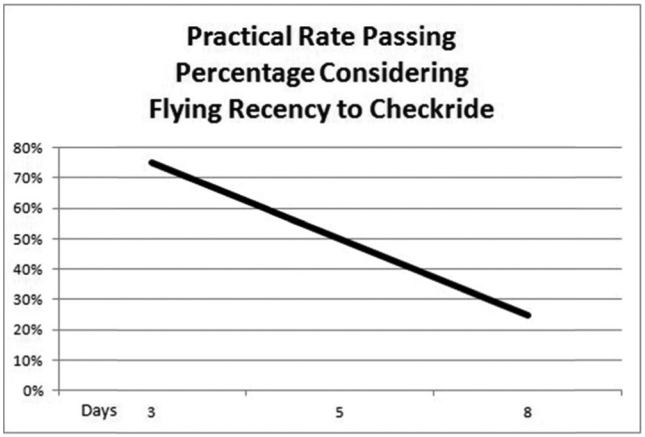
Anecdotally as an FAA designated pilot examiner I know that the longer it has been between when an applicant flew and when they take the checkride, the greater the possibility that their skills will have a little rust. More rust equals a greater chance of failure. I know this in my gut, but until recently, I didn't have any data to back it up.

Now I do.

After talking with two very large flight training providers, and without breaking down practical tests by any particular rating or certificate, it became obvious that the more recent a pilot had flown before his or her practical test, the more likely he or she was to pass.

In fact, the numbers were almost scary.

When a pilot has not flown for more than three days prior to taking the practical test, the schools noticed that the pass rate for tests went down to 75 percent. When more than five days had elapsed, it went down to 50 percent. And if more than 8 days had passed, the success rate was a mere 25 percent.



Wow.

What does this mean for businesses providing flight training? It means that a simple way to increase the success rate of your clients is to ensure they don't go to a practical test with a coating of rust on their skills.

When a student is signed off and ready to take a checkride, an instructor has completed much of his duties. He has prepared a student, helped him gain skills, helped him learn, helped him complete requirements the FAA has set forth as prerequisites for a practical test. But his duty doesn't stop there. We certainly hope any pilot who has been trained will be skilled and knowledgeable enough to continue to meet a minimum standard for some time, but it is an instructor's obligation to do all he can to ensure success.

This data shows that the simple practice of ensuring the applicant fly soon before taking a practical test is a simple way to increase the likelihood of success.

I know that practical tests get delayed or postponed for many reasons. Weather doesn't always cooperate, family obligations create delays, and aircraft maintenance creates unexpected holdups. If an applicant encounters one of these delays and then asks to not reschedule until he or she has had another opportunity to fly either on her own or with her instructor, I will always be willing to accept and even commend this decision. Examiners want to see pilots do the right things, make good decisions (and making sure they are good current pilots is certainly a good decision), and to pass their practical tests.

Flight schools and flight instructors can help reduce the risk of failure due to rusty skills by doing the following:

- Schedule a final flight review within three days of a practical test;
- If a delay is experienced prior to an applicant taking a practical test, work with the examiner to reschedule at a time that allows another review flight to be completed;

- Encourage students to fly before their practical test to fight off any rust, or even just to quell any test jitters before flying with the examiner.

These may seem like simple things, but it is very easy for them to be skipped.

Every applicant and his instructor want to get the test done, but being a good pilot in command (or instructor making sure that the applicant is setting themselves up for the best opportunity to pass) means making good decisions. That decision-making process is something that any examiner worth his or her salt should respect and value.

Fire customers for increased profitability

GREG BROWN

The owner of a well-regarded flight school once told me how he'd grown his business from a shoestring operation to a thriving and profitable company in only six years. Bob, as we'll call him, had much wisdom to share, but particularly interesting to me was the breakthrough he experienced the first time he "fired" a student.

Bob explained how, after opening his business, he had tried to accommodate the needs of every customer who came in the door. He and his wife had struggled with unacceptable margins in an effort to make flying affordable for all of their students. One day, after tackling a particularly trying cash flow problem, Bob was approached by a customer wanting to negotiate a few more dollars off of his already discounted flight training costs.

"You know," Bob said to the customer, "I don't think we're the right flight school for you. I really think it's time you visited the folks down the road. They're less expensive than we are and could be just what you're looking for."

"But I like your flight school better," the customer protested.

"I appreciate that," Bob said, "but you clearly need a lower price than we can offer. Now is a good time to make the change." Bob then thanked the customer for his business and ushered him out the door.

"I didn't think much about what I was saying at the time," Bob told me, "but later I realized it was a major breakthrough for us, because once I'd told one customer no, I

suddenly found myself able to draw the line with others. We'd known all along what we needed to charge to make a profit, but on that day I came to grips with setting profitable rates and abandoning those unwilling to pay them. We finally recognized that we needed to pick and choose our customers, and turn away those not profitable for our business. It sounds harsh, but without a profit you can't have a business, so this decision was good for everybody—us and our customers."

Bob then showed me around his beautiful facility, bragging about customer service and the high maintenance standards he sets for his training airplanes. "None of this could happen," he explained, "until we became selective about our customers."

Talking with Bob reminded me of similar wisdom once shared with me by the businessman who owned the largest independent insurance agency in our town. In his file cabinets, each customer's folder was emblazoned with a green, yellow, or red adhesive dot. "What do they mean?" I asked.

"Insurance is a business where you're made or broken by the quality of your customers," he said. "During our difficult early years, we learned that many customers demanded service way out of proportion to their accounts, and it was literally killing our business. We'd spend hours struggling to find a better deal for a $100-a-year customer, while ignoring large and really profitable accounts unless they called with a problem.

"We quickly realized that we had to find a way to trim losing customers so we could concentrate on building the winning ones, so we decided to rate our customers based on their profitability to our business."

He then explained how his agency annually rates every customer, considering factors such as premium size, payment record, new coverage added over the year, number of claims, and service required. "Those who exceed a certain ratio get a green dot," he told me. "They are our best customers and we treat them like gold. Customers rating poorly for more than one year running, we direct elsewhere. Of course we don't want to leave anyone in the lurch, so we refer them to other agencies. But once the decision is made, they have to switch. Yellow dots are for marginal customers. Those earning yellow for two years running we code red, and then if that lasts for a year we let them go."

Back to the business of flight training. Dropping customers may sound harsh. But here are two business owners among many who've learned how expensive it is to carry unprofitable customers. In a tough business like flight training, you can't give your good customers what they deserve unless you earn a profit. That means targeting your good customers, focusing service to keep them happy, and letting those who don't fill the bill go elsewhere. How many customers in your business deserve red dots? "Firing" customers may be painful, but it means more flight schools can flourish. Let's hear it for a run on green dots

Does light aircraft equal light maintenance?

IAN J. TWOMBLY

For those flight schools that have thought about adding a light sport airplane to their fleet, Barry Pruitt, the chief of maintenance at LSA flight school Liberty Sport Aviation, has a message for you: "These airplanes have been stellar."

Pruitt is part of a small but growing movement in flight training—those who believe LSA are one key to the future of flight training. He has heard the complaints about LSA, including those related to their ability to hold up to the rigors of the flight training environment, which he says is a "nonevent."

Although many flight schools have shied away from adding an LSA to the flight line because of maintenance concerns, Pruitt says his school has had positive results with their fleet, which includes Gobosh, Flight Design, and Evektor.

"Tires, tubes, brake pads, and oil changes are about the only things we regularly do," he said. And despite suggestions to the contrary, they are going through tires at about the same rate as a certificated training airplane, or about 400 hours. Tire size, however, is an issue. Because LSA rules require that replacement parts be only those approved by the manufacturer, the ability to substitute tires for more commonly available sizes can be difficult.

That's one problem John Amundsen sees with the process. Amundsen is owner of Tailwheels, Etc. a flight school in central Florida focusing on primarily accelerated training that used to operate an Aerostar Festival and a Russian Sigma. "The lack of being able to do modifications is an issue," he said. Adding a VOR head, changing tire size, or modifying anything else on the airplane has to be factory approved.

Although Amundsen no longer offers LSA training, it isn't because the airplanes had maintenance issues, although there were a few problems. "The Sigma was built like a tank," he said. But the Aerostar had a few issues, including a split wheel, brakes, and some fuselage sidewall flexing. For him, it came down to an issue of the market. "In our particular niche, LSA doesn't work," he said. "But, I love the airplanes. The Jabiru engine [in the Aerostar] was a super little engine. It never used oil."

Pruitt said the secret to getting profit out of LSA is to ensure you are familiar with the airplanes. He recommends taking an inspection or maintenance course just prior to taking delivery or when you take delivery of the airplane. There are a few Rotax courses out there, and working on them is quite easy, he said.

Pruitt also recommends keeping some spare parts on hand because of the inability to swap out unapproved replacements. “In the past six months, I’ve replaced a fuel pressure indicator and an oil pressure indicator,” he said. “Keep one or two if you have a fleet.” He also said that tires, and the oil pressure sending unit and fuel pump for the Rotax, are good things to have on hand.

Another great benefit to flying an LSA with a Rotax engine is the ability to fly with mogas. Rotax engines are approved for up to 10 percent Ethanol, making mogas a real possibility for people in most states. Between that and four gallons an hour burned, the savings can add up.

Everyone loves a good plane crash

IAN J. TWOMBLY

The popularity of Nascar racing in this country can be at least partially explained by one thing—there is lots of crashing. Americans love destruction, which is unfortunate if you run a business trying to train people how to fly.

As much as we all like to complain about how much the news media sensationalizes the news, the fact they do it is proof that people have a big appetite for anything that involves some amount of destruction. If your school experiences an accident or incident involving one of your airplanes or students, a person from a local or regional news source could come to you for a comment. Here are five tips on how to deal with the situation:

1. **Talk to a friend.** The best defense is a good offense. Make friends with local reporters and journalists well in advance of any news event, and you have a much better chance of having the story go in a way that’s good for your school. Most people in the news business are on some sort of social media site, or you can reach them via phone or email through their employer. Offer to have them take a flight. Keep them involved with community building events, and learn their kids’ names. It could come in handy.

2. **Control the message**. Your decision of whether or not to speak to someone looking for a comment has ramifications. If you don’t, you could be portrayed as hostile and unflattering. But if you do speak, what you say could be used against you.

Saying "no comment" is not often a good strategy. Instead, consider explaining your side of the story in the clearest terms possible. Stress your school's commitment to safety, or say you are interested in learning the facts.

3. **Don't speculate.** Don't take the opportunity to do what most pilots do after an accident or incident and speculate on the cause. It's not the forum for that. If you choose to say anything, answer only those facts you know to be true.

4. **Use layman's terms.** Most people don't understand aviation's language. Don't confuse the reporter or journalist by throwing in jargon. Keep it as basic as possible to avoid confusion. Help by confirming facts on the airplane type and other basic tasks, but without talking about things only a pilot would understand. Constant-speed prop means nothing to most people.

5. **Stay on the record.** You've probably heard of on the record or on background. Don't do this. Consider anything you are saying to be printable, quotable, and useable. People make mistakes and many people thought they were being helpful when they speculated or gave some additional information off the record. Keep it quotable, which means choosing your words carefully and speaking clearly.

Hopefully it won't happen to one of your students, but if an incident or accident does occur with one of your assets, making a few smart choices when it comes to talking to the media could help to maintain your standing in the community.

What is your school worth?

GAEL MARCHAL

This is often one of the first questions we hear in my business of FBO and flight school sales and acquisitions, and the answer invariably is, "It depends." The technical definition for fair market value goes something like this, "The probable price at which a willing buyer will buy from a willing seller when (1) both are unrelated, (2) know the relevant facts, (3) neither is under any compulsion to buy or sell, and (4) all rights and benefit inherent in (or attributable to) the item must have been included in the transfer." While this is great for textbooks, it does not really answer the question. The bottom line is that valuation is a subjective process, but it is important to understand the basic ways in which it is assessed to begin the process of either selling or buying a business.

There are two primary determinants of value, income, and assets. If the company were not profitable, it would simply be worth the sum of the fair market value of all of its assets. This of course assumes item two above; if the seller were under duress (i.e. creditors were demanding to be paid), then the company is worth the liquidation value of its assets, which is the price they would attract at auction. This is the proverbial "fire sale." Of course, the entire purpose of running a business is to be profitable, so how does income affect valuation?

The principal of income valuation comes from one of the main tenants of finance, the time-value of money. Specifically, a risky asset (i.e. the business) is worth the sum of present values of all future cash flows at the appropriate risk adjusted rate of return. Once again, this is great for textbooks but not particularly useful from the business owner's perspective. The main problems involve determining "future cash-flows" and "appropriate risk adjusted rate of return."

A private equity firm or Wall Street analyst would typically try to model out future cash flows using historical financials combined with forecasts and projections, and then compare the private company to a public company to determine what the market thinks the appropriate return should be. This is referred to as the Discounted Cash Flow (DCF) method of valuation.

An alternative to DCF valuation is relative valuation. When you hear of someone discussing income multiples, this is the approach they are using. Generally, the past three-years of financials are used to determine a baseline for comparison. These financials are "recast" to express the true profitability of the company. This not only includes adding back depreciation, amortization, and interest to arrive at an EBITDA number (Earnings Before Interest, Taxes, Depreciation, and Amortization) but any non-business related expenses which may be present. It is no secret that most small business owners incorporate certain personal expenses into their business. By factoring these out, a better picture of the health of the business can be derived. Since flight training companies are typically a lifestyle business, meaning that they will be owner operated, the owner's salary will typically be added back as well, giving us the Seller's Discretionary Earnings (SDE), which represents all of the economic benefit available to the buyer of the business. With the SDE or EBITDA for the past three years, a baseline can be established by either taking the average or weighted average, with the most recent numbers being weighted more than the older ones, of these three numbers.

This baseline number can be multiplied by the appropriate EBITDA or SDE multiple to arrive at a total value for the business. The question now becomes, "What is the appropriate multiple?" As we come full circle, the answer is, invariably, "It depends." Generally, we have found that a well performing flight training company should attract a 3 to 3.5 factor SDE multiple. If you are using an EBITDA multiple the typical range might be a factor of 3.5 to 4.5. However, one must be very careful

when looking at broad rules of thumb like this; they can vary greatly, depending on many factors. It is important, however, for the owner to be honest with themselves in recognizing the attractiveness of their own business when considering what kind of multiple it is worth. Is it in an attractive location? Close to a major metro center? What are the local demographics? What kinds of training aircraft are offered? What is the customer concentration? How long is the ground lease?

There are countless factors which can be considered when determining the attractiveness of the business, but the takeaway should be that an honest assessment of the company's financials and its attributes, from a buyer's point of view, should result in a reasonable expectation of business valuation. In the end, the buyer of a small business is essentially buying themselves a job. An owner/operator knows they are going to work in the business and they want to know how much they are going to make for their labor and return on investment. This means that terms and financing options will greatly affect the total price paid for the business.

Getting your students' better halves on board

IAN J. TWOMBLY

Learning to fly takes time and money. That much is obvious. But it also takes a lot of support at home. For one half of a relationship to take a bigger share of that time or money, the student must have his or her spouse or significant other's support. And as the business providing that training, it's up to you to help.

There are dozens of ways your school can get involved with supporting the student's family, and thus ease your student's transition to the aviation community. Here are five:

1. **Teach the student how to use the certificate.** Go beyond stalls and steep turns and figure out creative ways to expose your students to the larger aviation community by treating them like a pilot while they're still in training. That means making sure you visit lots of other airports to ease any hesitation about entering the traffic pattern, visiting the FBO, or getting a rental car. It also means exposing them to various regional destinations that are family oriented, whether that's the beach, quick

access to a city and its nightlife, or a great bed and breakfast near an airport. New pilots routinely stop flying after earning a certificate simply because they don't know where to go. Make sure to help while you still have them in training.

2. **Invite the spouse as a passenger.** It can be a delicate method, but if done properly, exposing a spouse or significant other during training with a flight can be a great way to get him or her involved. Clearly you wouldn't want to do this during power-on stall practice. And you might not even want to do it during cross-country practice. But if the weather is good and the day's lesson is VOR or GPS navigation, make it to a nearby airport with a lunch spot and invite the student's home support. As the flight school owner or manager, you can help standardize this a bit during CFI training, even going so far as to lay out some guidelines on distance, preparation, and proper lesson in the syllabus.

A word of caution about this method: There are myriad horror stories about spouses who have gone up on turbulent days with lots of maneuvering and never stepped foot in a small airplane again. In other words, there is real possibility of it backfiring.

3. **Bring the spouse into the community.** Your flight school should already have an associated community. Make sure to invite the spouses. Contests, social events, hot dog cookouts, movies at the school, and every other type of get-together should be open and welcoming to customers and their significant others. That may seem obvious, but it's quite common to see 10 guys hovering over a gas grill eating hot dogs with not a family member in sight. Think more family picnic than poker night and you get the idea. And just like you would do with your students, make sure to introduce spouses you think will have common interests.

4. **Offer classes to the better half.** Generally, the more someone knows about something, the more likely the person is to reach a level of understanding and acceptance. Such is the case with a spouse learning how to fly. The Pinch Hitter course, which various schools have offered for decades, does this up to a point. But it comes at it from a safety perspective. The basic idea is that a spouse can learn how to control the airplane in case the pilot is unable to perform the flying duties for any reason. These courses are often quite popular, and they can be effective for bringing the student's spouse or significant other into the fold. Their major flaw is that they are built on the assumption that flying is dangerous. It's safety training.

San Carlos Flight Center, this year's Best Flight School in AOPA's *Flight Training* Excellence Awards, does things a bit differently. The school conducts two different types of events aimed at spouses. "So You're Married to a Pilot" is open to pilots and their spouses. Owner Dan Dyer says it helps everybody who sits in the same airplane come to an understanding about their different experiences. The school's right-seat workshop is only open to nonpilots as a way to, "improve the experience of the right-seater," he said. It's meant to address basic flying topics and create an opportunity for

the spouses and frequent passengers to bond. Dyer says that their goal is to make a better environment for their pilots, which hopefully will lead to more flying.

5. **Get him or her on a trip.** Ask any longtime pilots how they got their spouses to fly with them, and the answer is almost always that they made the trip about their spouse. A flight around the pattern isn't going to excite most nonpilots. But a trip to the beach, camping, skiing, or whatever else it is your spouse likes to do is. Help your students and new pilots through this with organized fly-out trips. By organizing group trips to great locations, you're giving your students experience in a controlled environment and their spouses a great reason to go along. Many schools do this quite deftly. Seek them out and follow their lead.

A primer on minimum standards

IAN J. TWOMBLY

Flight training is conducted in a world of order. Syllabi, regulations, insurance requirements, and legal agreements are all included in the price of doing business these days. One set of requirements that surprises many new independent flight instructors is minimum commercial standards.

Minimum commercial standards are a set of defined procedures and criteria that must be complied with in order for a commercial activity to operate at an airport. Not every airport has minimum standards, but if yours does, you must abide by them.

This can present a problem for independent flight instructors, not to mention those wanting to start a traditional brick-and-mortar flight school. A typical minimum standards document may specify a square footage requirement, building lease restrictions, a requirement or limitation on the type of services provided, the number and type of aircraft that are available, or even the hours of operation. By setting these requirements, the airport is able to satisfy its requirements to keep the public safe and the airport available to everyone, without discrimination.

The story may not be as clear for independent instructors. Some minimum standards have been written in a way that practically makes it impossible for independent instructors to do business. Others make it difficult, but certainly not impossible. The posted minimum standards for the Chesterfield County Airport in Richmond, Va., are a good example. They require all independent instructors have a

county business license, an airport business permit, an independent instructor permit from the airport, and $1 million in insurance.

The practice of airports dictating business practices may seem draconian, but it is rooted in good intention. And it's perfectly legal.

The FAA doesn't require minimum standards, nor does it approve each airport's version. It will, however, review them upon request and offer recommendations. Otherwise, it's up to the airport to develop them, usually in concert with the community.

Thankfully, the FAA has built in some safeguards. For example, if an airport takes federal funds, in most cases it can't create an exclusive agreement with a business. And there is a formal appeals process. The federal aviation regulations spell out the process for both an informal and formal complaint, at which point the FAA is compelled to investigate.

Abiding by an airport's commercial minimum standards may be difficult, but generally the standards are transparent and exist as a means to protect the public. And if things don't seem quite right, there is recourse for business owners and independent instructors.

You can save on maintenance

JAMIE BECKETT

Standing between every flight school business and the quest to earn a profit is cost. Expenses. We can never separate ourselves from expenses. Yet we can control them to a degree. In fact, if we are to be truly successful in the operation of our businesses, we must control cost to the extent possible.

One of the major overriding costs of any flight school business is maintenance. Aircraft not only require normal mechanical repairs as might a car or a boat, but regulatory requirements necessitate inspections and maintenance that must take place in order to continue flying. This raises the question, should we do the maintenance ourselves, or should we farm it out to a local shop?

"You have to run the numbers," says Bill Boege of Propellerhead Aviation in Winter Haven, Fla. "Every situation is unique." Boege is an instructor and a mechanic who has been running his own successfully growing business for several years. He contracts for CFI services and employs multiple mechanics in his shop.

The practicality of choosing who should be doing your maintenance depends on a variety of factors. If you're a sole proprietor flying only one airplane with one instructor, it may make sense to do your own maintenance in an attempt to control costs. Then again, if you've got three or more aircraft in your fleet, you might be better served to farm your maintenance out and focus the time saved on marketing, customer service, and other business tasks that require your specific attention.

Should you choose to work with a local shop to do your maintenance, there are still options that can cut costs overall. "You can negotiate a rate," Boege suggests. Committing to using your local shop for scheduled maintenance and repairs may well allow you to shave a few dollars off the hourly shop rate. "That's especially true if you've got more than one airplane," says Boege. Those few dollars an hour saved can add up over the course of the year, and the shop will still be happy to have a new, dependable customer.

Other options may seem less obvious, but can just as easily save money on maintenance. If you use identical aircraft, that can save you money. Boege makes the point that not only will you save by only needing one set of manuals and one set of spare parts, but you may be able to negotiate favorable pricing when buying some parts used or in bulk since they can be used in any of the aircraft in your fleet.

Don't overlook the option of owner-assisted maintenance, either. That can cut your bill considerably. As Boege explains it, "If you've got a mechanically inclined CFI on staff who isn't flying, they can help out in the shop." That CFI or other office staffer may not be an A&P mechanic, but they can legally work under the direction of an A&P to do a considerable amount of work that would normally bill out at the shop rate. However, you'll be paying them from your payroll at a rate that's more than likely quite a bit lower than the shop's rate for a mechanic.

There's also the consideration of up-time. If the shop you work with is agreeable, they may be able to do maintenance on aircraft overnight, while you and your customers are sleeping. That puts your aircraft down for maintenance when your customers aren't trying to book them, leaving you more flyable time on your schedule, and more customers in the air.

Chapter Two: Safety

Go around and around

DAVID JACK KENNY

When asked to name the single most important skill to impart to a new pilot—or a pilot checking out in a new model of airplane—most of us would probably say landing without giving the matter much thought. It's certainly a reasonable choice: Sooner or later, you've got to get the thing back on the ground, and it's a big plus if it doesn't require repair before the next flight. But if learning to land is Job One, learning how to go around has to place a very close second. After all, new pilots often discover they didn't actually line things up quite as well as they'd hoped—and even the best of us are liable to find the aircraft we're following still hasn't cleared the runway.

Going around seems simple enough. Give it full power—you *did* set the mixture correctly as part of your pre-landing checklist, right?—and arrest the descent. Begin retracting flaps and gear, if applicable, in small increments as you attain a positive rate of climb. By the time you're ready to turn crosswind, it should be indistinguishable from any other climb to pattern altitude. In larger, faster, more complicated airplanes, more steps have to be accomplished in less time, and coordinating the throttle with enough rudder to counteract the resulting yaw becomes more critical in higher-powered models. Still, the basic problem is straightforward enough: Make a smooth transition from landing to climb configuration without hitting anything in between.

But simple doesn't always mean easy, and the data suggest that go-arounds are one essential skill that pilots don't practice enough. Over the past decade, mishandled go-arounds have resulted in an average of 40 accidents per year. That's a lot for a maneuver that's supposed to be automatic by the time a student's signed off to solo—especially considering that every flight involves a takeoff, and preferably a landing afterward, but it's possible for a pilot to go from one flight review to the next without ever attempting a go-around. Which, of course, may be part of the problem.

Experience helps. So does training. More than 70 percent of go-around accidents happen to student or private pilots; for all other types of accidents, the figure is less than 60 percent. This is one of several features that accidents during go-arounds share with accidents during landing attempts, which isn't surprising. What's the last resort when a landing is going bad?

The high proportion involving private and student pilots helps explain another thing that at first glance seems surprising: Despite the presumably greater difficulty of going around in complex or high-performance models, almost three-quarters of

the accident airplanes were fixed-gear singles, and of the 10 model lines that show up most frequently, eight are rated for 200 horsepower or less. Only one of the 10 has retractable gear (the Mooney M20 series).

Other details, however, are genuinely puzzling. Cessna 172s suffered more than twice as many go-around accidents (69) as fixed-gear Piper Cherokees (33) even though their handling characteristics, typical use, and fleet sizes are all fairly similar (by the most recent estimate, about 17,000 172s were active compared to around 15,000 Cherokees). There were only 12 among the 12,000 active Cessna 182s, which see less training duty and whose pilots probably, on average, benefit from a little more experience. Even though they haven't been built for decades, Cessna 150s still ranked fourth on the list with 20, largely because their pilots occasionally forget that 100 horsepower just isn't enough to force a climb with all 40 degrees of flaps still hanging out.

What actually goes wrong during go-arounds? All the things you'd expect. Waiting too long to make the decision leads to overruns, failures to climb enough to clear obstacles off the departure end, or stalls if the pilot tries to will the airplane over the trees with back pressure and body English. Configuration errors—particularly forgetting to begin retracting the flaps during climb-out—likewise lead to stalls or straight-ahead collisions. Losses of directional control are always popular; naturally, excursions off the left side of the runway are considerably more frequent than departures to the right.

What can a school (or an instructor) do to help address this problem? As with voting, students should be taught to go around early and often. Consider requiring at least one go-around on every flight, or at least in every session of pattern work, and to encourage students to make that commitment while there's still plenty of altitude below them. During flight reviews, consider having the pilot demonstrate the first go-around from a generous altitude, maybe 500 agl, so the instructor has plenty of time to assess the technique and take any needed corrective action. Particularly if the pilot owns the airplane, and it's a model the CFI hasn't flown much recently, there's a lot more to be gained than lost from approaching that first go-around with considerable caution.

Takeoffs really are optional

DAVID JACK KENNY

The first hands-on task taught to a student is usually the preflight inspection, and it's often the first thing a student is approved to do without direct supervision. As the student moves through primary training, though, preflights are apt to devolve into ritual. Yeah, the wings are still attached, and there's oil in the engine. Let's fly! This is less of a problem in the context of a busy flight school, where each aircraft is likely to be scrutinized by several different students and their instructors in the course of a day and hundred-hour inspections can come as often as every few weeks. But habits made as a student tend to carry over after a freshly certificated pilot goes out into the big, bad world. Out there, perfunctory preflights are an invite for trouble. How much trouble? In an average year 30 airplanes and a handful of helicopters are wrecked because their pilots missed discrepancies that should have either been fixed on the ground, or grounded the flight.

Some could have been fixed pretty easily. Last June, the Mississippi-based owner of a Cessna 182 got the same lesson that the Alaskan pilot of a Piper Super Cruiser learned about a month earlier: The engine won't keep running long with the fuel selector turned off. It will, however, run just long enough to get you off the ground and into a really awkward situation. Both airplanes had just been returned to service after annual inspections; the mechanics had turned the fuel off. (Both mechanics also insisted that they'd told the owners about this.) Anybody seen that before-takeoff checklist?

Fuel system problems figure heavily in the history of inadequate preflights, and most aren't a great deal more complicated. The most common, of course, is not determining exactly how much fuel is on board. If you don't know how much you've got, how do you know it's enough? After his forced landing, a Navion pilot told an FAA inspector that, "Had I had another 5 gallons in the tip [tank], I would have been okay." Well, yeah...

Water contamination is another perennial favorite. After the airplane's been sitting on the ramp through four days of Florida thunderstorms, you think you *might* want to check the tanks? (And maybe drain a little from the gascolator on top of the tank sample to make sure they're the same color? A tube of pure water looks a lot like a tube full of gas.) And unless fuel is already dripping out of them, it's worth teaching your students to take a good, hard look at those vent tubes while they're under there. Various tiny critters like to crawl in and take up residence, leading to fuel starvation

as vacuum builds inside the tank. The owner of one Rutan Vari-Eze prevented this problem by putting a black rubber cap on the tube, which worked beautifully. It would have been even better if he'd remembered to take it off again one August afternoon. When the engine quit at 2,000 feet he knew exactly what the problem was, but couldn't do anything about it in the cockpit.

Losing an engine is bad, but a flight-control failure can quickly become catastrophic. While things can break or jam in flight—most often because loose items get stuck in inconvenient places—the problems were usually apparent on the ground, or would have been if the pilot had bothered to look. A Twin Otter freighter making the short hop from Hyannis to Nantucket, Mass., lifted off early and rolled left until it crashed. Investigators found the lower control lock still installed, the same mistake that has destroyed aircraft from Skyhawks to King Airs, usually with fatal results. Other discrepancies were a little more subtle but no less disastrous. A planned photo shoot at the 2009 Sebring Sport Aviation Expo turned deadly when a Remos GX rolled right uncontrollably immediately after takeoff. It turned out that when the factory crew unfolded the wings, they'd neglected to connect the left aileron. A Washington owner restoring a Piper Super Cruiser had a history of doing crow-hops before the airplanes had been inspected; when his IA took him to task, he smiled and said, "It hasn't killed me yet." It did the next time. The PA-12 pitched up to a near-vertical attitude before stalling in. It turned out that he'd connected the elevator cables backwards—the third time he'd reversed cables on an airplane he was working on.

By the time they started the takeoff roll, each of these pilots should have checked "flight controls free and correct" twice—once during the walk-around, and again during the run-up. Are your students learning to believe that everything will always work as long as the wings haven't fallen off? There's a lot to be said for having your instructors take pains to get their attention. While you don't want them draining the oil or putting water in the fuel tanks, there are other ways. They can always ask the previous instructor to pull a breaker or two. Loosening some fasteners is okay provided you remember they're loose. One designated pilot examiner of an acquaintance liked to get out to the field early and stash a rubber chicken somewhere around the airplane—under the cowling, or back in the tailcone. If the student didn't find it, the flight portion of the checkride would usually be postponed.

Why bother taking off?

DAVID JACK KENNY

If any of your students mention a parent or spouse who's nervous about this whole idea of flying "little airplanes," you may not want to tell them that there's no need to go up in the air to get yourself into trouble. An average of three pilots a month become pen pals with the NTSB by meeting the Part 830 definition of "accident" somewhere between the ramp and the runway.

Only a handful of these cause serious injuries—10 in the last 15 years, only one of which was fatal—but they shred a lot of aluminum and keep A&Ps off the streets and sober doing engine teardowns after prop strikes. Of course, the insurance companies are *thrilled* to pay for this, and show their gratitude when it comes time to set our premiums.

If it's a small part of the national accident and insurance-claim picture, it's also arguably the most avoidable—fuel exhaustion being the only competition that comes to mind. From their very first lessons, student pilots start getting used to the idea that turning the "wheel" is not how you steer on the ground. Eventually those in tricycle-gear airplanes stop making S-turns across the taxi lines and learn something about how to position the flight controls to deal with gusts—although for too many of them, that seems to be one of the first skills forgotten after the checkride. More than 20 percent of taxi accidents involved gusts of various kinds, including 19 aircraft that were blown over by jet blast or prop wash.

If that makes you wonder whether looking where you're going is another skill that pilots allow to deteriorate, you're probably on to something: Almost 60 percent of these accidents involved airplanes that taxied into other aircraft, airport vehicles, buildings, signs, lights, or holes in the pavement, wandered out in front of landing traffic, or drifted off the taxiways onto "unsuitable terrain." Determining how many of those pilots were simultaneously trying to program GPS units, tune radios, copy the ATIS, unfold charts, make phone calls, write limericks, play video games, or figure out how to break up with their significant others requires not only going through all the individual reports, but believing that they'd actually admit this to the investigators. Still, it's probably substantial. Would you taxi into the side of a hangar if you actually saw it there in front of you?

More evidence that inattention is a bigger part of the problem than inexperience comes from looking at the pilots involved. Fewer than 10 percent were students, while almost half (49 percent) were commercial or airline transport pilots. Admittedly,

commercial pilots and ATPs account for a lot more taxi time than solo students, but wouldn't you think they could be counted on to move an airplane around the field without a problem?

Actually, it's surprising how little seems to help mitigate the risk of a taxi smack. More than 90 percent came during single-pilot operations—almost exactly the same as in all GA accidents. The proportions involving commercial or airline transport pilots, instructional flights, and taildraggers were similarly close to those in the accident record as a whole. It's almost as if these were purely random events, like hailstone damage to airplanes parked on the ramp.

But of course individual accidents are not random; they're the consequences of the actions taken or neglected by individual pilots. Those at a certain level of experience seem to find it particularly difficult to muster the self-discipline to do nothing else while taxiing the airplane. Requiring your instructors to set a firm and consistent example may not be enough to prevent new pilots from slipping into this trap later in their careers, but given the lasting influence good CFIs develop over their students, it's likely to help. If nothing else, it should help keep your training aircraft out on the line and save your students and instructors from a great deal of embarrassment.

Some things can't be taught

DAVID JACK KENNY

In our experience, one of the better ways to annoy a working flight instructor is to complain that the standard private pilot curriculum focuses on learning material—aerodynamics, meteorology, flight planning—and maneuvers. Commercial training is almost entirely about maneuvers, aside from some academic attention to advanced systems like turbine engines and cabin pressurization. A persistent school of critics likes to lament that this approach devotes too little time to cultivating good decision making.

Maybe. We've suggested before that the combination of reasonable intelligence and a healthy interest in self-preservation is enough to convince most pilots that they don't really want to determine fuel capacity by running every tank dry, or try to teach themselves aerobatics by trial and error, or rely on experimentation to learn whether they can still clear the trees loaded 400 pounds above maximum gross.

Most more-or-less sane individuals don't need a lot of specialized training to figure out that none of these are really good ideas. Still, any large population contains a few outliers, and every year's accident statistics are inflated by a relative handful of pilots whose enthusiasm outruns their judgment—or somehow believe sheer willpower can overcome the physical laws that govern the rest of the universe.

Want some examples? How about the 36-year-old doctor making a ferry flight in a BAC-167 Strikemaster (a British training and light attack jet)? He had all of 20 hours of time in type and no other aerobatic training, but couldn't resist celebrating his arrival with a roll at pattern altitude. He crashed inverted into the river. While the results were just as catastrophic, even that decision doesn't seem as absurdly ill-advised as a Florida Cirrus pilot's attempt to roll an SR22 at a GPS-estimated altitude of 129 feet. He, too, had no aerobatic training—but he'd just been to an airshow, and was flying home in the company of two genuine aerobatic airplanes, so why not? The angle of impact was 80 degrees nose-down.

For most of us airshows are good, clean fun, but they seem to have unfortunate effects on a susceptible few. The pilot who broke up a Baron trying to roll it with four passengers on board was said to have been obsessed by a performance that featured rolls performed in a Beech 18. About the only good thing to be said about this guy is that he started with enough altitude to allow overstress to rip the airframe apart—first the tail, then the wings—before it actually hit anything.

Do-it-yourself aerobatics are among the most spectacular lapses in judgment, but at least they're relatively rare. Far more common, too common in fact, are the pilots who don't quite believe that it takes real practice just to control an aircraft by instrument references, never mind tracking where it's going and what solid objects lie in between. Many simply blast off into the murk (including a subset who, apparently feeling that it's too scary during the day, prefer to do their scud-running at night when at least you can't see whatever it is you can't see). Some actually take the trouble to file IFR flight plans and pick up clearances they can't execute. Such was the case with the pilot of a Piper Lance who couldn't get the tower to authorize a VFR departure from Tulsa. He filed an instrument flight plan, perhaps thinking a few minutes' climb would put him on top—then couldn't manage to find either his assigned altitude or heading. The departure controller told him he was descending, not climbing as he'd reported, seconds before he blundered into a radio tower. The real tragedy was that four passengers were on board.

Casual attitudes toward flight planning cause other sorts of trouble, too: Witness the Cherokee pilot who passed up half a dozen airports only to exhaust his three hours' worth of fuel five miles short of the one whose airport/facility directory page was found on his kneeboard, or the Cessna 206 pilot who "assured his passengers he had enough fuel for the five-minute flight" and turned out to be wrong. Then there was the Alaskan who liked to stuff his 206 full of so much lumber, hardware,

and groceries that the tires looked flat. On the day it couldn't climb after takeoff and crashed into downtown Anchorage, it was a good 700 pounds overweight.

Would more formal study of decision making during primary training have convinced any of these people not to try these things? Somehow, we're skeptical.

When more is less

DAVID JACK KENNY

The old joke holds that the reason light twins have two engines is that they need them. It's a lot less funny when a student is hot and high on a single-engine approach and you have to hope engine No. 2 will catch in time to pull off the go-around. The accident record confirms the conventional wisdom: While accidents in twins are not a great deal more likely to kill the occupants than accidents in complex singles, almost all the fatalities seem to be the product of single-engine work.

We realize that this won't come as a surprise to anyone who's operated a multiengine training program. Still, the record was starker than we'd expected. More than five-sixths of the fatal multiengine training accidents over the past 10 years were either known to have been caused by engine-out drills gone wrong, or involved spins from altitude that are hard to explain in any other way. Half of the handful that remains involved engines that shut down inadvertently, most often due to errors in fuel management. The fatal accidents that seemed unrelated to a twin's single-engine performance and handling characteristics were pretty much limited to a bird strike at night that destroyed the horizontal stabilizer of a Seminole and a previously undiagnosed brain disease that led a CFI to suffer a seizure on short final.

Single-engine work also figures heavily into nonfatal accidents, too. Go-arounds account for twice as large a share of the multiengine accident record as for singles. Twenty percent of them are fatal, but almost all are the outcomes of single-engine approaches that don't go quite as planned. Many are the result of configuration errors—the CFI forgets having turned off the fuel selector for the dead engine, or the student forgets to richen the mixture—but in others, the engine just won't start in time. There's an argument to be made for teaching students from Day One that single-engine go-arounds aren't likely to be an option in most piston twins, and having the instructor time any interventions accordingly.

Stalls and spins figured heavily into the fatal accident count. Some were self-inflicted wounds, like the school that tasked low-time instructors to prepare for a designated pilot examiner who liked to "simulate engine failure during slow flight or stall recoveries." A CFI conducting an instrument proficiency check in a Beech Duke pulled one throttle back to idle at 200 feet above the ground and refused to let the airplane's owner, whom he was training, restore power. The owner suffered serious burns when the airplane rolled over into the trees, but at least he survived. It's not clear whether the instructor knew what VMC is in that model, but if he wasn't below it, he was awfully close. Others are downright mysterious, like the flight review of a 3,400-hour commercial pilot that ended less than an hour later in a fatal flat spin. No one saw the accident, and both he and his CFI had considerable experience in the airplane, leaving little clue as to what went wrong.

Gear-ups, premature gear retractions, and fuel-management accidents are also more common in twins, even though most show no obvious relation to single-engine practice. In most cases, it seems more as though the process of flying a twin took the student (and instructor) too close to the saturation point to deal with one more variable. At least relatively few of these killed anyone, or left the aircraft past the point of being cost-effective to repair.

Admittedly, twin trainers do spend a lot of their working lives with one propeller either windmilling or feathered. Still, the near-absence of all other operations from the fatal-accident record should open an eye or two. That same record suggests a couple of commonsense precautions: Have instructors introduce students to single-engine operations gradually, from a safe altitude, before moving on to approaches or engine failures after takeoff. Make sure your MEIs are thoroughly versed in every aspect of the subject, from aerodynamics to the specific operational details of that make and model, before letting them train new students. And here, too, it's well worth your while to find out what they're really doing when they're out where you can't see them. It helps if your students understand that face time with the chief instructor is a gift, particularly if they get it at no extra charge. Genuine interest in what they're learning and how they're processing it goes a long way to foster forthright discussion of their training experiences.

“Uh dad—about those airplanes?”

DAVID JACK KENNY

The hard life of a training aircraft brings some compensation. There’s little doubt that an engine that’s flown six days a week stands a better chance of making TBO than one that’s flown six times a year. Still, all those student landings, erratic takeoff rolls, and high-speed taxi turns take their toll on more than just the gear.

Operators anticipate a certain amount of damage and figure the resulting repair and insurance expenses into the cost of doing business, and unless the students or pilots responsible are guilty of obvious misbehavior, usually exact no punishment beyond emphatic instruction in how to avoid making that same mistake again. Of course, that assumes they can figure out who the pilot actually was. The accident record contains recurrent examples of damaged airplanes being put back on the flight line without a word to anyone.

In many cases, it appears that no one recognized the problem at the time. Typical was a Cessna 172 at AOPA’s home field of Frederick, Md. A Phase III inspection found that a hard landing had damaged the firewall at some point since the Phase II inspection was signed off some 48 flight hours earlier. No one, whether student, instructor, or renter, ever reported a hard landing to the operator. The odds are good that the airplane had been flown repeatedly after the original impact, which probably did nothing to limit the damage.

More perplexing are the pilots who don’t notice when the airplane hits something solid. The student pilot who used the left wing of a Diamond DA20 to demolish a runway distance remaining sign said he never felt the impact. He went on to fly four more circuits of the pattern and was apparently as surprised as anyone to find a three-foot hole in the leading edge after he parked. At least he could blame inexperience. The private pilot who hit a REIL control box with his Cessna 172 while fussing with a handheld GPS, then taxied back and took off cross-country with a crushed exhaust system, mangled prop tips, a bent firewall, and damage to the left horizontal stabilizer might have been expected to notice that something unusual had taken place. And since he was going to be in the airplane, he had some incentive to stop and find out what.

That last example makes it only a little easier to believe that other accidents weren’t deliberately concealed. After a company check-out, an instructor took a student on a cross-country flight in a Piper Arrow. After landing, they found wrinkled skins and popped rivets in both wings directly above the main gear. The instructor

swore that nothing had happened while he'd been in the airplane that could have caused that kind of damage.

If that suggests a somewhat casual approach to the preflight inspection—the instructor said he certainly would have noticed the damage if he'd done the preflight himself rather trusting first the check pilot and then his student—it's not the only case. A student went around after a hard landing in a Cessna 172, then landed without further incident. The next pilot who took the airplane out returned it early out of concern for a "different sound in the engine noise;" only then did anyone notice the bent propeller tip (the firewall also turned out to be bent). Preflight? What preflight?

On the other hand, the renter of another Cessna pointed out wrinkled wing skins and was told by a company mechanic that the aircraft was safe. At that time, it had flown 99 hours since its last 100-hour inspection. When the next inspection began four days later, mechanics discovered three buckled ribs and damage to the spar. The pilot who actually banged it up was never identified.

The postflight inspection may be the most neglected aspect of general aviation, but it's to every operator's advantage to learn of any damage as soon as possible—not just to correct it before it gets worse, but to minimize the risk to future pilots and passengers. Requiring that instructors insist on a real postflight after every lesson is apt to save trouble in the long run, as is making sure students and renters understand the consequences of flying a compromised airplane can be much worse than those of admitting they've screwed up.

To rent or not to rent

DAVID JACK KENNY

Back in the 1930s, humorist Robert Benchley took up a silly if well-intended proposal to cut down on drunk driving by having gas stations refuse to sell fuel to drivers who were obviously intoxicated. (Apparently the country hadn't yet come to grips with the amount of mayhem a drunk driver could wreak with the gas already in the tank.) Noting the range between "stately, dignified drunks" and drivers who were sober but mischievous (and maybe shouldn't be behind the wheel, either), he wondered, "Short of marrying the driver, how is the gas-station attendant supposed to know?"

The same question applies to would-be airplane renters, and to borrow another of Benchley's lines, the most common answer is, "Don't you wish you knew?" A two-hour check-out with one of your flight instructors can probably weed out those whose basic airmanship simply isn't up to the job. If the customer sets up a power-off stall by reaching for the mag switch, or thinks a career total of 85 hours in a Cessna 150 is sufficient preparation to fly your new Cirrus SR22 over the Rockies at night, it probably won't be a difficult decision. But how do you guard against the rental pilot who shows up with a fat logbook and the self-discipline to play it straight all the way through the check-out, only to lapse back into his native insanity once free of adult supervision?

Even when the pilot's background contains some clues, the operator is unlikely to hear about them in time. The pilot of a rented Piper Arrow attracted plenty of attention during his last few hours on earth, landing long, fast, and hard, then "firewalling the throttle and locking the brakes" as he taxied to parking with the tanks almost dry. He took on 10 gallons of fuel and two passengers and told the lineman, "Let me see if I can't scare these guys to death." Numerous witnesses saw the Arrow flying inverted with the gear down before it crashed into a lake, but only during the investigation did it come out that the pilot's certificate had previously been suspended for doing aerobatics in an unapproved airplane on a Victor airway—or that he'd been put on probation as a student after showing his instructor videotape of the aerobatic maneuvers he'd attempted during a student solo.

While this is an extreme case, the accident report notes that his check-out in the Arrow—completed just four days before the accident—included more than 10 hours of dual. Had he really been able to hold it together that long, or had his check-out instructor gotten some unnerving insights into this man's character?

More typical—and easier to prevent—are accidents arising from renters' attempts to return the aircraft on schedule. Most FBOs have sensible policies and go out of their way to discourage their customers from flying in marginal conditions, but some renters still succumb to self-imposed pressure to get the airplane back or die trying. This may have played a part in the crash of another Arrow whose return had been delayed by thunderstorms; the pilot had been told to have the airplane back by 8:30 p.m. because he wasn't night current, but he didn't take off until about 10 minutes before 9 p.m. Likewise, the VFR-only pilot of a Cessna 172 requested a special VFR clearance to take off under an 800-foot ceiling at night, only to crash into a lake within 10 minutes. His rental contract specifically banned flight in conditions below VFR minimums. Both pilots died, along with three passengers in the Skyhawk and two more in the Arrow.

Is there an answer? Knowing your customers helps—if your instructors trained the pilot, you'll have a better idea what to expect—but few operators can afford to turn down walk-in renters. Making it clear that getting the airplane back on time is less

important than getting it back in one piece might not be enough to save it from the pilot who *has* to be at work in the morning, clouds or no clouds. If the best you have to go on is a gut sense of the pilot's seriousness and competence as informed by a detailed oral exam and careful review of the logbook, you'll still be ahead of that gas-station owner. Among the telltale signs that Benchley suggested watching for was the driver's pointing to the tank and saying, "A pound of liver, please." Thanks, Bob.

Too soon to solo?

DAVID JACK KENNY

It's no secret that landing an airplane can be tricky. Many students find it difficult to learn, which means their instructors sometimes find it difficult to teach. It's a complicated problem when you try to break it down. Feeling out a pitch attitude that will keep the airplane level until it has bled off enough airspeed to quit flying wouldn't be too hard if it didn't require constantly increasing back pressure; get that wrong and you'll either dive toward the runway or balloon. Meanwhile, you've also got to start all this at an altitude from which the ship will settle onto the runway while the lift stops happening rather than falling like a dropped Steinway. Concentrating on all this, it's easy to forget that you still need to pay attention to which direction the nose is pointed and whether both sides of the runway are maintaining a respectful distance. It's a lot to ask of someone with maybe 15 or 20 hours of flight time, 90 percent of which by necessity was not spent perfecting actual landings.

Learning to land helicopters is difficult, too, but for completely different reasons. A normal landing is an extension of a stable hover. Gradually reducing collective then allows the machine to descend to the ground while the rotors maintain full rpm. Control authority doesn't change, and there's next to no horizontal velocity in any direction. Learning to hover is the hard part. Once the student can consistently make the aircraft stay in one place without wandering around, bringing it in for a landing is almost an afterthought. (Run-on landings, of course, are another matter.)

Perhaps it's not surprising, then, that fixed-wing students are more susceptible than helicopter students to landing accidents on their solo flights; but the extent of that difference might raise some eyebrows. There are a couple of ways to measure it: For example, landings on student solos were the setting for 42 percent of all primary

training accidents in airplanes but less than three percent of those in helicopters. Since a larger share of fixed-wing accidents happen during primary training to begin with, the difference is even more pronounced when measured in terms of all instructional accidents: 29 percent of those in airplanes versus just over one percent in helicopters. The best gauge, though, is relative to the number of pilots involved. We don't know whether dropout rates are similar in both categories, but we do know that everyone who earns a private pilot certificate was once a student. FAA records report having issued a little more than nine times as many in the airplane category as for helicopters (9.27 times for those of you keeping score) between 2002 and 2011. Over the same period, student pilots suffered more than 110 times as many solo landing accidents in airplanes.

Fixed-wing flight training has traditionally been divided into three phases, of which the first is geared primarily toward preparing the student to solo. Given the difficulty of the challenge and the amount of aluminum that's getting bent as a result, it may be time to question whether solo flight shouldn't be moved later in the curriculum—after completion of the dual cross-countries and increased mastery of crosswind technique and ground reference maneuvers, among other things. The sharper and more instinctive the student's control of the physical airplane, the easier it should be to keep up with the aircraft during those hectic few seconds when it's getting ready to kiss the pavement. While we haven't been able to pin it down, it seems likely that the single-minded fixation on racing to the first solo might be a vestige of military flight training—an environment in which it was highly desirable to have unsuitable candidates wash out as early as possible. Civilian flight instruction doesn't share that goal.

Kristine Hartzell is the Air Safety Institute's chief flight instructor. She's flown under parts 91, 135, and 121 and given a couple of thousand hours of dual in everything from Cessna 150s to the Airbus A319—experience that's convinced her that the current focus on an early solo probably does more harm than good. Yes, it provides an incentive during the inevitable plateaus and a nice bragging point for those talented or lucky enough to do it especially early. However, postponing it to the last third of the curriculum could be expected to reduce stress on student and CFI alike, quite possibly driving the accident rate down in the process.

How to stall an airplane—and when

DAVID JACK KENNY

Whether during initial training, flight reviews, or pursuing commercial or airline transport pilot certificates, fixed-wing flight instruction devotes considerable time to teaching stall prevention, recognition, and recovery. This makes it a bit disheartening that inadvertent stalls continue to cause substantial numbers of accidents every year, and still more so that they tend to be severe, among those most likely to cause death or serious injury. More discouraging still is that flight training itself is by no means free of stall accidents, although they almost never happen while deliberately practicing stalls.

Between 2002 and 2011, unexpected stalls caused at least 307 accidents on instructional flights (not counting any during solo maneuver practice by certificated pilots, which are difficult to identify in the NTSB's records). Fifty-five of them (18 percent) were fatal—more than twice the share of training accidents not involving stalls. Inadvertent stalls led to one-sixth of all accidents reported during fixed-wing training and nearly 30 percent of fatal accidents.

Of course, there are stalls and then there are stalls. More than two-thirds (207) happened during student solos, and nearly 90 percent of those (181) were the result of flaring too high while trying to land. None of them killed anyone. During dual instruction, on the other hand, the largest share occurred while performing maneuvers not involving intentional stalls. More than half were fatal, as were five of the seven maneuvering stalls on student solos. More than two-thirds of all fatal stall accidents took place during low-altitude maneuvering.

What kind of maneuvering? In the case of students operating free of adult supervision, the principal answer seems to be "unauthorized." Four of seven were the consequence of low-altitude buzz jobs; another was the result of excessively steep turns at low altitude, while two remain unexplained. One occurred while practicing for the checkride and the other while en route to it on a short flight to meet the designated pilot examiner.

In dual instruction, on the other hand, the maneuvers that most often led to trouble were emergency drills, primarily simulated engine failures. These led to more than half of all maneuvering stalls—14 of 25 during primary training, 17 of 33 in advanced—and together accounted for 14 of the 32 that were fatal. The other fatal

stalls during primary training all happened during takeoff attempts, two on student solos and six in dual lessons, while seven of the remaining 10 during advanced instruction occurred during pattern entries or descents to pattern altitude. (Only one of those was during an instrument approach; the rest were VFR.) And while they weren't as prevalent as on student solos, dual lessons were hardly immune to landing stalls, either; almost half the nonfatal accidents (49 of 107) resulted from dropping airplanes onto runways.

So what can be done? Well, a good first step is to follow the advice of the *Hitchhiker's Guide to the Galaxy:* "Don't panic!" During the same decade in which there were 207 stall accidents on student solos, the FAA estimates that slightly more than 207,000 people earned private pilot certificates in the airplane category. So 99.9 percent of those students got through all their solo flights without a stall from which they couldn't recover. That may be as well as we can reasonably expect to do, although you might still want to encourage your instructors to make extra sure their students have really learned to time the flare and not just enjoyed a lucky streak.

The number and severity of these accidents during dual instruction are more disturbing, since we expect CFIs to keep themselves, the aircraft they fly, and the pilots they're teaching all out of trouble. The fact that stalls can still surprise two certificated pilots suggests that the contrived set-up in which they're practiced isn't the best model of the situations where stalls are truly a threat, while the frequency of fatal crashes during simulated emergency practice reinforces two points that are made over and over without quite penetrating as far as they should. Simulated emergencies shouldn't be undertaken casually. They need to be carefully planned and even more carefully monitored to make absolutely sure things don't get out of hand. By the time a pretend emergency becomes real, there's usually little time to react, and in simulated engine failures, airspeed and altitude are quickly exhausted as well. And the FAA's long-standing focus on the dangers posed by distraction isn't just something to remember for the checkride. When an airplane gets away from two pilots at once, there's a good chance at least one wasn't paying attention. However simple or demanding the technique being practiced, success depends on attending to the airplane first, and that means airspeed, attitude, and coordination.

How to have the 'safety talk'

DAVID JACK KENNY

There are instructors who just don't like to talk about accidents. They don't want to discuss news stories or review NTSB reports with their students, and certainly don't relish scrutinizing the statistics for patterns that could shed light on how to recognize and manage the inevitable risks of flight. OK, much as those of us in the business love our data, we have to admit that a lack of enthusiasm for analyzing safety statistics isn't necessarily a character flaw. But we do think it's counterproductive to shy away from discussing the real-world consequences of bad decisions and poor technique.

One argument is that students, and especially new students, are already nervous enough about their safety. Dwelling too much on the bad things that have happened to other pilots may scare them off altogether. There is some justice to this, though it's easily overstated. It takes some time before it begins to feel at all natural to flutter around thousands of feet off the ground in a contraption the size of a subcompact car, especially on those days when the air seems to have formed the conscious intention of preventing straight-and-level flight. The rattly feel and well-worn interior still shared by much of the training fleet probably don't help much, either. (It takes a certain analytic bent to draw real comfort from the logical implications of the fact that said contraption has kept on flying for thousands of hours already.)

The key phrase, of course is "too much," and how much is too much also depends on "when." Spending a student's first ground lesson reviewing all the different ways of cracking up is probably a good way to identify those who *really* want to learn to fly, but it's also a great way to shoo away legitimate prospects. There's much more to gain than lose from making the first few flights casual and fun. Let the student learn what there is to look forward to before starting in on the serious stuff.

As a student progresses toward solo, though, it makes sense to draw attention to the ways things can go wrong. A good, hard look at landing accidents helps prepare for that first solo in the pattern in a couple of ways. It shows both how easily things can go awry—nationwide, we average a landing accident every day—but also how easy most of them would have been to prevent. (Every year, dozens of pilots get blown into the weeds by that dreaded three-knot crosswind.) It also shows how rarely anyone gets hurt. The sharp-eyed student will notice that other student pilots seem to figure into an awful lot of these … but also that no one is immune.

A look at departure stalls will reinforce the lesson learned by hard, long, and short landings: airspeed, airspeed, airspeed. The sharply higher fatality of takeoff accidents

ought to curb some of the complacency that can develop once lifting off comes to seem routine. Add in a quick review of carb ice if the training airplane's prone to it, and the first solo will be informed by a much keener awareness of what really matters in getting around the pattern and what's more a matter of style.

As they progress into solo air work and cross-country planning, a gut understanding of the seriousness of getting the big things wrong can be a lifesaver. Altitude, fuel, and suspicion toward the weather can prevent or at least mitigate most catastrophes. Reading about the buzz jobs that ended in low-level stalls and the cross-country flights that came up five miles short of their fuel stops underlines the seriousness of the whole enterprise and the vital importance of getting all the details right—but also shows just how greatly risk can be reduced by observing a few simple rules. That habit of mind is perhaps the best tool to take from initial training into a long flying career.

Naturally, some reports make more useful case studies than others. Those due to factors truly beyond the pilot's control breed fear without offering much in the way of learning. The loss of a propeller blade has been known to wrench an engine off its mounts, making an airplane uncontrollable, and helicopters have lost main rotor blades. Both are extremely rare, however, and don't provide many lessons, especially when the problem couldn't have been detected on preflight. On the other hand, the pilots who fly into thunderstorms at night without bothering to check the weather, the ones who stretch their fuel reserves to save 20 cents a gallon on fill-up, and the folks who overload the aircraft but don't bother calculating takeoff performance have inadvertently provided great training material. And while most students don't want or need to see the goriest tales in the literature, those do have their place. Sometimes shock therapy is warranted. A student who's betrayed a fondness for unapproved maneuvers or low-altitude aerobatics might just benefit from reading the story of the guy who decided to find out whether he could roll a Baron ... with four passengers aboard (NTSB Case No. ATL07FA077). Take particular note of how far apart they found the bodies.

Stay up where it's safe

DAVID JACK KENNY

Student pilots shouldn't be allowed anywhere near the surface. At healthy altitudes they usually manage pretty well, but let them get close to *terra firma* and mischief frequently results. More than 80 percent of all accidents on student solos take place during attempts to take off, land, or go around. The common element? Proximity to Mother Earth. They should just stay away from the ground.

Unfortunately, most of them happen to live there, and the aircraft in which they train also need to come down every once in a while. Given that inconvenient reality, we'll have to settle for some less perfect way of keeping students from tangling with terrain. Not letting them take off would be another approach, but wouldn't improve the health of the flight training industry. We've previously noted that taking off is not without its hazards, and once it's accomplished successfully, there's still the problem of getting back down in one piece. Skillful landing technique may be the ideal solution in the long run (say, by the day of the checkride), but the risks that lurk between here and there can be greatly reduced by early mastery of the go-around—meaning not just how, but when.

The *how* can't be ignored. A quick review found 89 accidents during attempted go-arounds on instructional flights over the past 10 years. While that's less than 5 percent of all fixed-wing training accidents, it's still about one every six weeks—a lot for a maneuver every student supposedly has down cold before getting signed off to solo. And for at least two reasons, it's almost certainly an undercount. When certificated pilots suffer accidents while flying solo, the NTSB almost always labels them "personal" flights even when said pilots were known to be practicing maneuvers for more advanced certificates. And classifying touch-and-go accidents as takeoff, landing, or go-around is often arbitrary.

Of the 89 we know about, more than half (47) happened on student solos, suggesting that a maneuver that ought to be second nature isn't automatic once things start getting crazy. More than a third (17) were losses of directional control, mostly off the left side of the runway. Coordinating that rapid increase to full power with sufficient right rudder takes some practice. Another quarter (11) were chiefly due to errors configuring the aircraft, most often retracting the flaps too suddenly or failing to retract them at all. Neglecting to turn off carburetor heat also figures into the picture. In 10, the students simply waited too long and found themselves without room to climb, while nine stalled after pitching up too hard. Nose-up trim meant to

ease the landing contributes to this, as can the sudden effects of full power at low airspeed.

Only three of those 89 accidents were on solo flights by pilots with recreational or higher certificates, underlining the difficulty of identifying that kind of training in the NTSB records. The 39 during dual instruction were evenly divided between primary (20) and advanced (19). Having an instructor say "Go around!" at least helps students make that decision in time; only two of the 20 in primary instruction were blamed on excessive delays. Configuration errors, other stalls, and runway excursions caused six apiece.

Curiously enough, late decisions caused more accidents in advanced dual, where there were four—all while practicing emergency approaches after simulated engine failures. This was the second most common cause in advanced instruction; six accidents resulted from attempted single-engine go-arounds in multiengine training (a maneuver strongly discouraged by the flight manuals of many light twins). Between them, pretend powerplant problems accounted for more than half the total, another reminder that instructors need to be careful about when and where they close the throttle and when to admit that it's not working out. Losses of directional control, configuration errors, and stalls for other reasons each led to three.

Of course, accidents during go-arounds are the least of our worries. Nearly two-thirds of all crashes on student solos are landings gone wrong, and half of those begin with veers or swerves off the side of the runway. Many, if not most, of those might have been avoided had a timely decision to go around been followed by competent execution. That might not help as much with avoiding problems timing the flare, the other gremlin bedeviling student landings. Still, some pull up prematurely or drive the nose gear into the pavement in a panic after seeing too much runway slide behind them. Those students, too (and their aircraft) could have flown again the next day if they'd just remembered that while they do have to come down sometime, they don't have to do it on the first try.

Or the second. Or the third....

Troublemakers

DAVID JACK KENNY

Running a successful flight school would be challenging enough if you could at least count on your own people to consistently be on your side. Alas, that's not a safe assumption. While the industry's image has long been tarnished by the stereotype of the green CFI whose principal interest is not teaching, most of these people inflict more damage on student motivation than on aircraft or human bodies. That's a problem, but it doesn't compare to the damage done by so-called instructors who can't resist the temptation to play with company aircraft—sometimes destroying aircraft, students, and other instructors alike.

In 2004, for example, two CFIs managed to break up a Piper Saratoga in flight. Both were employed by the same Georgia school, and one was supposed to be giving the other a check-out in the airplane so the second instructor could begin teaching in it. This should have been a careful but routine review of systems, procedures, and maneuvers, but apparently that program was too dull and they decided to have some fun instead. One witness who was both a pilot and mechanic told investigators that he "heard the engine slow down then speed up and start popping, then [it] stopped. Sounded to me like it was doing a loop or some kind of high G-load maneuver." After hearing a couple of loud bangs, he looked up in time to see the pieces of the airplane fluttering down from the sky. The NTSB's Materials Lab found the fracture signatures consistent with overstress, with no evidence of any pre-existing damage or corrosion. While we don't know for certain that they'd attempted aerobatics, it's not easy to break the wings off a Saratoga performing normal maneuvers in good weather.

An even clearer case of a young CFI trying to do unapproved aerobatics in a school airplane came up in central Texas in 2007. This time the victims were a student, a low-time foreign pilot, and a hard-working Piper Arrow, which broke apart at almost 12,000 feet and wound up scattered over a half a square mile of prairie. The flight was supposed to have been a dual cross-country of about 130 nm each way, but how much fun is that? Even though the terrain is low and relatively flat, the airplane made a series of five climbs to altitudes between 11,000 and 13,000 feet, each followed by a dive and rapid acceleration. On the last, its airspeed increased to almost 20 knots above maneuvering speed before the airplane began to climb and then disappeared from radar. Other students and other instructors both told the investigators that the CFI in question liked to do spins and rolls in school airplanes without much regard to center of gravity or certification standards. The rolls would typically involve a dive

to build speed to 140 knots before pulling up and rolling; at maximum gross weight in the Arrow, maneuvering speed was 116. The primary instructor of the student who was killed actually had lunch with the accident CFI just before the flight and asked him "not to do any funny stuff" with her student on board. Sorry—no such luck.

Aerobatics aren't the only way that exuberant instructors wreak havoc. Witnesses agreed that a Citabria had been making exceptionally steep turns in the traffic pattern of a towered field in Michigan; a 2,700-hour CFI was giving instruction to a 370-hour commercial pilot. When the tower cleared them to reverse course and land in the opposite direction, they stalled it in trying to make the 180. A California instructor on a time-building dual cross-country let his student fly a Piper Warrior into a box canyon; they hit the ground while trying to turn. An instructor in New York taking three passengers on a discovery flight stalled a Cessna 172 in slow flight at 300 feet, narrowly missing the Coney Island boardwalk, while in Maine, a CFI with a history of doing steep turns and zero-G maneuvers at low altitude got a little too low and killed three Air Force Junior ROTC cadets on an orientation flight.

Since most dual instruction takes place away from the watchful eye of the owner or chief flight instructor, and most people who are smart enough to earn flight instructor's certificates are also smart enough to hide their antisocial tendencies during job interviews and check flights, how are you supposed to prevent this kind of mayhem? Great question! Too bad an equally good answer is elusive. But close communication between management, students, and the line instructors has to be one key. The propensities of at least two of the CFIs were well known around their schools, but no one thought to tell the people in charge. Plainly, they should have.

Regular lesson reviews with students should help bring inappropriate activities to light, and students benefit from learning that a chat with the chief flight instructor is an opportunity, not a punishment. A close working relationship with all your instructors makes it easier for them to bring up any concerns—and despite the loyalty that binds pilots in general and the CFIs within a school in particular, those who take a sober, responsible view of flight safety have to be made to understand that this includes the refusal to tolerate those who don't. Their colleagues aren't there for their own entertainment; they're supposed to be raising the next generation of safe and proficient pilots. Despite what it says on the bumper sticker, flight instruction is one situation where it's *not* okay to have too much fun.

Don’t crash like you train

DAVID JACK KENNY

The big guys have full-motion simulators. You may wonder how accurately their programming predicts the behavior of an aircraft operating way beyond its design envelope, but at least they provide a safe way to practice running checklists and flipping switches while being tossed up, down, and sideways in the dark. Want to try a partial-panel approach to minimums flying inverted with one engine on fire? It’s probably in the library somewhere.

Out here in the small-aircraft world, finding realistic ways to train for emergencies is a lot trickier. Many of the most dangerous situations can’t be simulated at all, at least not with any fidelity. Whether in a single or a twin, pulling an engine back to idle at 200 feet above the ground on initial climb-out just isn’t a good idea (unless maybe you’ve got a few more thousand feet of runway in front of you, and caution is in order even then). Practicing it at altitude is certainly useful—the student gets a sense of how sharply the nose has to be lowered to maintain controllable airspeed until you get back down to the deck—but doesn’t come close to duplicating the shock and paralysis of having the engine quit for real. Everyone knows what’s about to happen and is ready to react. Maybe things should work that way in the real world, but often they don’t.

Likewise, most light aircraft don’t provide a realistic way to simulate an attitude instrument failure. Yes, you can cover up the suspect gauge, but that skips right past the most crucial step. A series of studies going back to the late 1990s has shown that most instrument-rated GA pilots can fly partial-panel once they’ve identified the failure and covered the inoperative instruments—but actually recognizing and diagnosing the failure can take as long as seven minutes, plenty of time for the aircraft to enter unusual attitudes. Even more surprising was that in the Air Safety Institute’s 2002 study, less than one-quarter of the pilots tested actually covered the failed instruments after they’d figured out the problem. Those who did flew better than those who didn’t.

Unfortunately, there’s usually no way to surreptitiously disable the vacuum system of a traditional instrument panel during a training flight. Glass panels offer a few more options, such as pulling AHRS circuit breakers or turning a display’s brightness control down to zero—but, once again, it’s hard to pull it off without the student noticing.

The difficulties in simulating instrument failures may come back to bite if a real failure occurs in IMC, but the training itself is usually safe enough. The same can’t

be said of simulated engine failures. This is especially true in twins—the Nov. 8 issue of *Flight School Business* noted that almost all fatal multiengine training accidents are the consequence of single-engine work—but pulling a single's throttle back to idle shouldn't be taken too lightly, either. That's particularly true when operating close to the ground at a high angle of attack, which is to say when trying to simulate that failure after takeoff. Even an experienced instructor in a highly capable airplane can see things go bad in a hurry if the initial response isn't exactly right. In Montana in 2006, a brand-new Pilatus PC-12 was destroyed trying to practice turning back to the runway after a power loss. The 3,200-hour instructor had previously worked as a Pilatus company pilot, while the private pilot who owned the airplane had 140 hours in type. There's no question that they were deliberately practicing a turnback: They announced this over the CTAF. Two months earlier in California, a Cirrus SR20 came up short of the runway on the first try, recovered, and then spun in while trying it again. The tower controller had approved the request for a low approach, simulated engine failure on climb-out, and landing in the opposite direction.

Even the power losses at altitude that instructors love to spring on their students aren't risk-free. It's a good practice for the CFI to assume the engine won't regain power, because it just might not. Should that happen, it's nicer to be within range of some place you can actually land, and farm fields may be less inviting than you'd think. A fairly typical example involved a California instructor who neglected to apply carb heat while simulating an engine failure in a Cessna 172; the left wing hit the ground during the resulting forced landing to a pasture. Last fall a private pilot checkride in Indiana ended with that Skyhawk upside-down in a bean field following the simulated power-off approach; the engine died when they tried to go around. A helicopter CFI checkride went into the trees after a practice autorotation turned into the real thing, possibly because the FAA inspector conducting it chopped the throttle contrary to the recommendations in the flight manual. It turned out that he'd logged just two hours in piston-engine helicopters over the preceding two years. You have to wonder whether pilot examiners face additional risk because of their lack of familiarity with the pilot flying and, at times, the make and model of aircraft used for the test.

The easiest thing?

DAVID JACK KENNY

Ask a student pilot, and you'll probably be told that taking off is the easiest part of any flight lesson. At least, that applies to normal takeoffs; soft-field technique is another matter. When all you want to do is get out to the practice area to drill maneuvers or around the pattern to work on landings, the takeoff is a foregone conclusion. Point the nose down the runway, open the throttle, and go. What could be simpler?

Like too many things that seem stone obvious, this one turns out to be wrong. Takeoffs run second only to landings as an opportunity for pilots to get into trouble. Almost one-fifth of all fixed-wing accidents happen during takeoff attempts, and for all the time pilots spend worrying about their landings, botched takeoffs are more than six times as likely to be fatal.

Of course, this is partly a matter of opportunity. As the old saying goes, "Nobody's ever crashed into the sky." The converse is also true: It's a lot easier to hit things when there are things around to hit. But most of the same solid objects are in the vicinity whether you're coming or going, and you'd think they'd be easier to avoid before the gear leave the ground. You'd also think that hitting them from a standing start would result in a softer impact than dropping in out of the sky. In both cases, you'd be wrong.

During a landing, speed is decreasing (or should be) and the aircraft is aimed at the near end of the field with mostly open space beyond. Taking off, the aircraft should be gaining speed—if not, that could be your problem—and increasing its angle of attack as it abandons the safety of the airfield for all the obstructions across the fence. At full power, turning and rolling tendencies are maximized before there's enough airspeed to provide complete control authority. Throw in a sudden distraction, a gusting crosswind, or improper elevator trim, and things can quickly get out of hand.

And that assumes the powerplant keeps producing power. While we don't recommend training for engine failures while close to the ground, the concern over them isn't misplaced. Fully one-quarter of all takeoff accidents over the past 10 years resulted from either known breakdowns in engines or fuel systems, or engines that lost power for reasons that couldn't be reconstructed. Another five percent were due to fuel mismanagement, most often fuel selectors turned off or set to the wrong tank. All told, engines quitting during takeoff caused almost 500 accidents over the past 10 years—one every eight days, on average.

Of course, that means there are more than twice as many in which the engines can't be blamed. A relative handful—65 in 10 years—were triggered by breakdowns in some other part of the airplane, most often landing gear or a control cable, but more than 70 percent of all takeoff accidents were purely pilot-inflicted. The most common cause was loss of control (directional, attitude, or both), which accounted for 359, but there were almost as many departure stalls, with 291. Runway conditions were blamed for 116, while weight and density altitude were only implicated in 49.

Perhaps most perplexing, this is one of the few areas in which the accident record of training flights doesn't look much different from the record overall. Takeoffs made up 18 percent of training accidents and 19 percent of those on non-training flights. It's true that those on training flights were only two-thirds as likely to be fatal, which probably reflects both the weight and power of the aircraft involved and the higher share that arise from simple losses of directional control. Still, what's distressing isn't that training flights don't fare better, but that there's so little sign of improvement after pilots pass their checkrides. Student pilots suffer about twice their share of landing accidents, but private pilots are at least as prone to bungled takeoffs.

Complacency probably enters into this, but so, perhaps, does training. A brief informal survey of a few of the CFIs around AOPA headquarters suggested that only around 5 to 15 percent of all dual instruction given toward the private certificate focuses on normal and crosswind takeoffs. Maybe that isn't enough. Every flight includes at least one, and even if they are the easiest part of flying, they end in spilled blood or bent aluminum about three times a week. Maybe they're not as simple as they seem.

To spin or not to spin

DAVID JACK KENNY

In 1949, the Civil Aeronautics Board eliminated the requirement that applicants for a private pilot certificate demonstrate spin entry and recovery during their checkrides. In many ways, it seems to have been a good decision: At that time, more pilots were being killed practicing intentional spins than by spins entered inadvertently. (A similar consideration eventually led the FAA to quit simulating engine failures just after takeoff on the multiengine practical test.) One result, though, is that it's become

common for pilots to earn their private and even commercial certificates without ever even seeing a spin, at least from the inside. Given that stall/spin accidents continue to cause dozens of fatalities every year, there's room to wonder whether it's really enough to emphasize teaching spin *awareness* rather than recovery.

One point worth remembering is that relatively few accidents arise from inadvertent spins entered at altitude, and in most of those, the spins were deliberate. The great majority of spin-related fatalities result from uncoordinated stalls in the traffic pattern or overly aggressive low-altitude maneuvering. Under those conditions, recovery is usually impossible; even with perfect technique, most light airplanes need at least 1,000 feet to recover from a spin once it develops. The chief safety benefit of spin training would therefore seem to lie in improving the ability to recognize an incipient spin and prevent it from ever occurring.

Of course, there are other reasons a pilot might seek spin instruction. Some may view it as emergency training, or need it to get past an exaggerated fear of stalls. Some might want to increase their mastery over the aircraft and comfort with unusual attitudes, and others just think it's fun. CFI candidates, of course, have no choice, although the logbook endorsement attesting to their "instructional proficiency" probably carries more weight for some of them than others.

But the fact that someone asks for spin training (and is willing to pay for it) doesn't oblige any particular school or instructor to provide it. While it's not unduly dangerous when done properly, there are some real risks. It's true that we see relatively few accidents during spin training, but then, there's not that much of it going on.

Before deciding to go ahead, several items are worth considering.

The aircraft. Of course, if your fleet doesn't include any airplanes certified for intentional spins, you're done. Even if it does, however, there are other considerations. Can the gyros be caged? If not, should they be disconnected or removed? Has there been any recent work on the flight controls or control surfaces? An exceptionally careful inspection is probably a good idea. After a Cessna 152 failed to recover during spin practice, killing both student and CFI, investigators found that the rudder bumpers had been installed inverted. When the right one moved past its stop, it jammed the rudder at full deflection.

Weight and balance are also especially critical. Odds are your instructors don't make explicit calculations for every routine training flight, but, in a spin, controllability may only be available within a much narrower loading envelope. A newly minted private pilot spun a Cessna 172 into the ocean with two passengers aboard after ignoring Cessna's prohibition against attempting spins with the back seat occupied, and several unrecoverable flat spins in Pitts S-2s have been traced in part to centers of gravity aft of limits.

The instructor. Do you have a CFI who is really comfortable with spins, and has taught them or practiced them recently in the same model of aircraft you're going

to use? If not, is someone more experienced available to help get at least one of your instructors up to speed? The time to brush up on the finer points of recovery technique is probably not when a nervous student is seeing it for the first time.

The student. Two different considerations come into play here. Is the student reasonably calm and level-headed? In a fatal Arizona crash in another Cessna 152, the student—a 230-pound male—had a reputation for freezing at the controls. In all likelihood, he simply overpowered the 100-pound female instructor who'd agreed to introduce him to spins.

Even if the student won't endanger the instructor, will he or she endanger others later? Any doubts about whether the student has the maturity and good judgment to put this training to appropriate use could be grounds for refusal, or at least postponement. The pilot who spun the Cessna 172 into the Pacific was 19 years old and had held his private pilot certificate for three days. Another 19-year-old working on his commercial had previously received spin training in a Diamond DA20, and apparently decided that to try one during an otherwise uneventful cross-country in the same airplane. He failed to recover, spinning down more than 6,000 feet before crashing by the shore of a lake.

If you find you're not staffed, not equipped, or just not comfortable with the risk-reward ratio, don't agonize. Keep doing the things you do best, and send the student off to an upset recovery recourse or aerobatic instructor to whom spins are entirely routine. Both of them should thank you for the referral.

CFIs should forgo foolish fuel planning

DAVID JACK KENNY

A CFI giving primary dual instruction is generally presumed to be acting as pilot in command, and is consequently held responsible if anything goes wrong. Sometimes this can seem a little unfair, as when a low-time fixed-wing student bounces a landing hard enough to damage the gear or wrinkle the firewall. The line between giving the student latitude to learn and intervening in time to save the aircraft can get pretty fine. On the other hand, when difficulties arise from basic failures in flight planning—

getting caught above an expected layer of evening fog, for example, or neglecting to assess takeoff or landing performance—the instructor's culpability is hard to deny. In our book, the most glaring examples of flight instructors shirking their "responsibility for ... the operation of that aircraft" (in the immortal words of FAR 91.3) are dual flights that come up short because their CFIs allowed the aircraft to succumb to fuel exhaustion.

It's hard to think of any flight-planning task more basic than making sure there's enough juice on board to keep the engine running from takeoff to touchdown (not to mention the required reserves). The essential elements aren't all that complicated: One needs to know the expected length of the flight, fuel burn under those conditions, and the quantity already in the tanks. Maybe we're idealists, but these are all bits of information we'd think any pilot would want before attempting aviation. Of course, knowledge is only as useful as the decisions based on it, so a fourth piece is also crucial: willingness to take action when things aren't adding up.

Human nature being what it is, not everyone who's committed this sin is eager to own up. A few years ago, Flight Training published an account of a fuel-exhaustion accident on a dual flight in a Cessna 172. On their way home from doing touch-and-goes at another airport 14 miles away the engine quit, necessitating a forced landing. It turned out the instructor hadn't verified the student's preflight estimate that each tank held about six gallons. After the story ran, however, the editors received an angry e-mail from the CFI involved insisting that the loss of power must have been due to some sort of mechanical problem. The fact that the FAA inspector who responded to the scene found no discrepancies with the engine or fuel system, no sign of leakage, and no usable fuel in the tanks, lines, or strainer might not prove he was wrong, but certainly doesn't convince us he was right.

Except when weight and balance require, there's no obvious advantage to taking off with low fuel. If refueling after every lesson seems a little extreme, at least consider setting firm rules on when it's absolutely required. Say, for example, a trainer has five hours of endurance. If the hours flown since the last fill-up and those expected on the next lesson sum to more than three, it's time to get some gas.

Fuel requirements are more delicate in most small training helicopters thanks to sharp limits on maximum takeoff weight; the trade-off is that they have far more options for precautionary landings if supplies start to run low. Of course, the best place to make a precautionary landing is probably still at an airport, so we're left shaking our heads at accounts of helicopter pilots who pass up available fuel stops only to have to put it down out in the countryside. When the pilot in question turns out to be a CFI giving a lesson, head-shaking turns to forehead slaps.

We still marvel at one accident that occurred more than a decade ago during a dual night cross-country down in Texas. According to their written report, "The CFI and student discussed the low fuel status while overflying" the last airport along

their route, but "elected not to refuel." About 10 miles south of their home base, the "amber colored low fuel warning light illuminated," followed a few minutes later by an emergency autorotation into the trees. Neither was injured, but the landing was hard enough to separate the tail boom. And why did they choose not to stop for fuel? It seems that only self-service was available, and neither had brought a credit card.

This might be a good vehicle for reminding your instructors that just because they can't get fuel doesn't mean they don't still need it. "Better to be down there wishing you were up here than vice versa" never applies much more than when the engine goes quiet over a dark landscape. There are worse things than spending the night at an unfamiliar airport, and in this case that wasn't their only option. The field they passed was only 22 nm from their base, a straight shot by highway. Maybe they could have stopped and made a phone call?

Traffic patterns not as safe as many pilots expect

DAVID JACK KENNY

We've all heard it. Pilots who want to break ground in marginal weather, students anxious to maintain momentum, and instructors trying to balance unfavorable conditions with their students' needs and their own, decide that instead of attempting anything ambitious, they'll "just buzz around the pattern." It certainly seems benign. You'll remain within sight and ideally even gliding distance of the field, making it easy to get home ahead of advancing weather and providing realistic options for handling an engine failure. It turns out, though, that the traffic pattern isn't quite the equivalent of rocking in the cradle.

After all, 80 percent of crashes on fixed-wing student solos happen while those students are trying to take off, land, or go around. It's better during dual instruction, but only to a degree: Half of all accidents on dual flights took place during those same maneuvers, regardless of the experience level of the pilots being instructed. And a recent review of accidents involving stalls found that more than 70 percent of those not precipitated by some other emergency—icing, say, or loss of engine power—occurred while in or maneuvering to enter the traffic pattern. Intentional stalls, including spin training, led to only two percent.

It's less surprising when you think about it—as we've observed before, it's easier to hit something when there's something close enough to hit. Pattern work not only occupies the bulk of the time we spend within 1,000 feet of the ground, but is the setting for most of the maneuvering we do at lower airspeeds and higher angles of attack. It's a favorable set-up for unintended stalls in circumstances that look very little like deliberate stall training at altitude. The break will be unexpected and very possibly sharper, and the ground will be a whole lot closer and more threatening. The impulse to pull back when the nose drops can be overwhelming, and this only aggravates the stall. And of course pattern altitude is close to the minimum most light airplanes require to recover from an incipient spin—even before they begin descending to make the turn to base.

More surprising is that the base-to-final turn, long noted as the classic set-up for an unintended spin, isn't actually the scene of the majority of pattern stalls. In fact, only a little more than 10 percent occurred while making turns, and that includes turning to crosswind, downwind, and base as well as final. Throw in those that happened on final—usually while making S-turns or otherwise trying to slow down for spacing—and you've still only accounted for about one in six.

Instead, far and away the largest share—nearly 40 percent—came while trying to get from the runway to the crosswind turn. So much for taking off being the easiest part of the flight! Worse, only a small share of departure stalls involve complicating factors like high density altitude, contaminated runways, or short, obstructed strips. Most appear to be caused by nothing more than failures to let the airplane accelerate to its proper climb speed, sometimes compounded by configuration errors (too much nose-up trim, too much or too little flap extension, and/or too rich a fuel mixture at high-elevation fields).

About half as many happen during go-arounds, making it the second largest category. While the go-around is one of the most fundamental maneuvers, one that's supposed to have been mastered before the first solo, evidence suggests that they're not practiced nearly enough after the checkride. In faster, heavier, more complex airplanes, the combination of rapid changes in power, attitude, and configuration at low airspeed and close to the ground can quickly get out of control. Adding in lots of nose-up trim—say, enough to maintain approach speed hands-off—complicates things further by requiring lots of forward pressure on the yoke, plus some fast, rough retrimming, to prevent the airplane from pitching up precipitously when full power is applied.

We all need to get around the pattern, and practicing takeoffs, landings, and go-arounds is the best way to improve them. Just don't get too comfortable—or think nothing bad can happen while you're so close to the airport.

Check out—or not

DAVID JACK KENNY

Down here in Accident Central at the Air Safety Institute, we like to start off each day by reviewing the latest batch of fresh, hot NTSB reports. (It's an acquired taste.) Most are mundane, some are tragic, and a few just leave us shaking our heads. Usually that's because the decision-making process of the pilot involved was, shall we say, obscure. Think of the guy who tried to land an RV-6 on a 1,100-foot grass strip with a 20-knot tailwind. A lot of fuel-exhaustion and VFR-into-IMC accidents fall into this category. We've collected a long list under the collective label "What Were They Thinking?"

Occasionally the pilot isn't the only one whose decision-making is difficult to parse. A recent NTSB factual report, while brief, is worth analyzing line by line:

According to the pilot, he had reserved a Cessna 172 but was mistakenly given a Cessna 162, an airplane he had never flown.

Just this first sentence is pretty surprising. Naturally, people make mistakes, but at least in our experience, most FBOs have systems in place to limit the resulting damage. Each customer might, for instance, be asked to fill out a profile listing certificates and ratings held, total and recent flight times, and the dates of his or her last medical and flight review. Having a staff instructor spend a few minutes verifying all this against that pilot's logbook isn't a bad idea, and a new customer, even with extensive time in type, should reasonably expect a thorough checkout—not just stalls, slow flight, and a few landings, but a ground review of systems and procedures and maybe even a written quiz before any actual flying. Once all that's done, you'd expect that profile to record which aircraft the renter's been checked out in by which instructors on what dates—and the front-desk staff to cross-check it before handing over any keys. If the owners of the FBO (or any leaseback aircraft) don't insist on it, chances are their insurance underwriters will.

In this case, though, things seem to have been less formal, and complete unfamiliarity with the aircraft didn't intimidate the pilot. To be fair, he was pretty experienced, with more than 1,750 hours of total flight time, and you'd think a smaller airplane should be easier to handle. Right? As so often happens, getting it off the ground proved less of a problem than getting it back down again:

After flying to the practice area and preforming slow flight with flaps extended, he returned to the airport for landing. He said there was a helicopter ahead of him and he considered performing a go-around. The helicopter cleared the runway and the pilot decided to land. The

airplane was going too fast and it bounced and began to porpoise. The airplane veered off the west side of the runway. The nose gear collapsed and the left wing struck the ground.

The results were about what you'd expect:

The airplane came to rest approximately midfield. According to the operator, the firewall, fuselage, and rear bulkhead were buckled, and the left front and rear wing spars were bent.

All in all, a pretty tough day at the office, aside from the crucial fact that the pilot wasn't injured. In *How to Be a Jewish Mother*, Dan Greenburg suggested that since the punch line is the funniest part of a joke, one ought to tell it first. Most professional comics, though, prefer to save it for the end, and this report follows that classic structure:

The pilot said he had never flown or had been checked out in a Cessna 162. In addition, he had not flown for some time and was trying to regain currency.

So let's review: An out-of-practice pilot apparently didn't feel the need to ask a CFI to help him get those flying muscles back into shape. An FBO rented him an airplane without checking either his qualifications or his currency. When presented with a model he'd never flown before, that pilot saw no reason not to try figuring it out by trial and error. (Error won.) It seems fair to wonder what *everyone* involved was thinking, not to mention whether this particular FBO has tightened up its rental and checkout procedures as a result.

How does helicopter training safety compare to airplanes?

DAVID JACK KENNY

An experienced pilot beginning the transition from airplanes to helicopters (or vice versa) is apt to be more struck by unexpected differences than unexpected parallels. It's not just the near-total dissimilarity of the flight controls, or the number of things that work opposite the ways that have become familiar—helicopter students traditionally take the right seat, fixed-wing students the left, and helicopters need left pedal in most of the situations where airplanes require right rudder. The basic relationships between the machines and the air they move through differ so completely that even where similarities exist, they serve to point out differences.

Both vehicles pitch downward to accelerate, for instance, but in helicopters that doesn't imply a descent. Climbing with the nose below the horizon is an odd sensation for most fixed-wing pilots.

Naturally, those differences shape the ways new pilots are trained, with effects that can be seen in their respective safety records. A helicopter's ability to make an emergency landing almost anywhere—and the very limited payload capacity of small trainers like the Robinson R22—justify an approach to fuel management that may initially strike airplane pilots as almost unbelievably casual. (The regulations also recognize this distinction, requiring only a 20-minute reserve on VFR helicopter flights whether it's day or night. Airplanes need at least a 30-minute reserve in daylight hours and 45 minutes after dark.) Helicopter CFIs might feel amply prepared for an hour of dual after adding an hour and five minutes' worth of gas to whatever's in the tanks, and the record shows they're right: During primary instruction, accidents due to fuel mismanagement aren't any more common in helicopters than airplanes, only accounting for about four percent of training accidents in each.

Likewise, for all the perceived fragility of those rapidly rotating assemblies of swash plates and bell cranks and push-pull tubes and long, skinny, disconcertingly flexible blades, helicopters are no more likely to crash as the result of either mechanical failures or unexplained engine stoppages. In both categories of aircraft, these cause about 20 percent of all accidents during dual instruction.

The comparison of accidents on student solos is less straightforward, and the reasons speak to the most surprising contrast between their respective records. As we've reported before, about two-thirds of all accidents during primary fixed-wing instruction happen on student solos even though solo flight typically accounts for less than a quarter of total training time. Most of these solo accidents are some variety of bad landings; almost all (more than 90 percent) happen while attempting takeoffs, landings, or go-arounds. The result is that events whose risk is determined more by time of exposure than pilot skill—like mechanical problems, which are presumably independent of who happens to be flying the airplane—make up a smaller share of that larger set. Mechanical issues only account for about six percent of accidents on fixed-wing solos.

During helicopter training, on the other hand, only a quarter of all accidents occur on solo flights. In other words, helicopter students have one solo accident for every three on dual lessons; fixed-wing students have six. And while about half the solo helicopter accidents happen during takeoffs, landings, or hovering and hover-taxiing, the same is true of accidents during dual—and the share of accidents arising from mechanical problems is about 20 percent in each.

So what insulates helicopter students from the excess risk of those early solo flights? Longer pre-solo training seems to be one factor. A great deal of primary

training is conducted in Robinson helicopters, which are subject to Special Federal Aviation Regulation (SFAR) 73. Among other things, SFAR 73 requires that new students receive a minimum of 20 hours dual prior to the first solo, and not all students are ready after just 20 hours. Fixed-wing students often solo earlier, occasionally in as little as eight or 10 hours. We don't know how many schools conducting primary training in other models choose to impose similar constraints, but Robinson's share of the training market is clearly large: Nearly two-thirds of all accidents in primary instruction involve R22s.

The other factor is probably physics. Most fixed-wing students find learning to land the most difficult aspect of pre-solo training. The airplane has to be brought under more and more precise control as it nears the runway while simultaneously slowing down, progressively reducing control authority. Except in run-on landings, helicopters are brought to a stationary hover before settling to the ground. Much less momentum has to be dissipated, and control authority remains undiminished. By the time they're allowed to solo, helicopter students should have attained considerable proficiency in hovering techniques. Having spent more time mastering the approach to a gentler touchdown, perhaps it's not surprising that helicopter students don't muff nearly as many landings.

Think twice, land once

DAVID JACK KENNY

Whatever their eventual finding of probable cause, a recent NTSB factual report serves to remind us of another lesson that's too often memorized without being understood. Briefly, on a 90-degree July day, a Kansas student and his instructor tried to make a soft-field takeoff from a 2,340-foot grass runway in a Beech Sundowner. The instructor later reported that "the airplane did not accelerate as expected," and though it did lift off, it never climbed out of ground effect. The instructor made a slight turn away from the trees off the departure end to aim for "some shorter trees to the right," but fortunately the airplane didn't make it that far. It came to a stop upright on the ground after hitting a barbed-wire fence.

The CFI subsequently told investigators that "the airplane did not perform as the POH indicated." Well, no—and he shouldn't have been under any illusion that it would.

Never mind that any pilot's operating handbook performance figures are based on trials performed by a professional test pilot in a brand-new, perfectly rigged aircraft with a fresh engine; the fact is that the factory test pilots didn't get that performance on every single try, either. If the POH cites 2,000 feet to clear a 50-foot obstacle, that doesn't mean that you or anyone you know could actually get the aircraft 50 feet off the ground in that distance; it means that pretty well nobody on earth could do it in less. Counting on achieving book performance is like assuming you'll earn your retirement savings at the poker table. For most of us, it just won't work out.

The Air Safety Institute has long recommended the "50 percent solution"—add at least half to published takeoff and landing distances before deciding whether the runway's long enough, and recognize that like any rule of thumb, there will be times when it's not conservative enough. If the space you have to work with just meets the POH-plus-50-percent standard, you may still find obstructions getting too close for comfort. Before attempting to use that runway, take stock of how well the aircraft seems to be flying that day, then make a clear-eyed assessment of how well *you* seem to be flying it.

If things look good so far, it's time to start thinking about Plan B. Pushing in the throttle isn't like jumping off a bridge: You can still change your mind and stop provided you do it in time. The moment at which the instructor noticed that the airplane "did not accelerate as expected" would have been a fine time to do just that. Even if it was too late to make a complete stop by the end of the runway, any subsequent impact would have been at a far lower speed—causing correspondingly less damage. Better, of course, would have been actually to compute the accelerate-stop distance, the amount of real estate needed to reach rotation speed, think better of it, and brake to a halt. If the sum of those parts exceeds the length of the runway, then Houston, you have a problem.

And since there's no guarantee things will work out even when the runway's long enough, it's worth giving a little advance thought to when to put Plan B into effect. Once things are moving, it's hard to think fast enough to keep up, so the best pilots we know predetermine the point at which they'll give it up as a bad job, close the throttle, and jump on the brakes. "If we haven't reached half of our takeoff speed by the time we've used one-third of the runway" is one popular rule of thumb, though not realistic for the shortest back-country strips.

One of the oldest aviation clichés is that while landings are mandatory, takeoffs remain optional. This raises the question of what the Sundowner was doing on that grass strip in the first place. Doing short-field work on a genuine grass strip is admirable, provided it can actually be done. In this case, the investigators took their own look at the Sundowner's POH and concluded that a takeoff from grass under that day's conditions would have required at least 2,827 feet to clear that hypothetical 50-foot obstacle—almost 500 feet *longer* than the runway itself.

This suggests another rule of thumb worth impressing on your instructors: Before deciding to land somewhere, make sure you'll have enough room to take off again. Have the students figure it out, too—they need the practice—and compare the results. This is one case where two computations might be better than one.

Should you customize your checklists?

DAVID JACK KENNY

Decades of experience have established the consistent use of checklists as a "best practice" in aviation. The practical test standards for almost any certificate or rating back this up by laying a heavy emphasis on checklist usage (while also allowing it to be deferred at times when immediate reference to the written document would be impractical or unsafe). It's a habit worth instilling early, since checklists tend to become longer and more complicated as aircraft get bigger and faster, raising both the probability and consequences of missing something crucial. Checklists have even found their way into the operating room; surgical teams having learned that they significantly reduce their error rates.

For all their virtues, though, checklists can also present some dilemmas, starting with the question of which to use. Aircraft built before 1979 may not even have been furnished with them by their manufacturers (aside from a few terse placards on their panels).

Aftermarket companies fill some of these voids, but their offerings may not be as specific to a given model and year as its pilot might want. Nor are they necessarily as complete as you'd like: One popular choice for the 180-horsepower Piper Arrow doesn't list a best-glide speed. (To be fair, neither does the slender "Operator's Manual" that came with the airplane.) Owners and operators of uncommon models (including most homebuilts) may not even have that option, leaving them with no recourse but to write and refine their own thereby, at least initially, running that same risk of leaving something out.

Surprisingly enough, neither the practical test standards nor the regulations specify whose checklists must be used. FAR 135.83, for example, merely requires

the operator to provide its pilots with "a cockpit checklist." Practical test standards typically use phrases like "Completes the appropriate checklist"; what's appropriate is presumably for the examiner to decide.

When available, manufacturers' checklists at least have presumptive authority. They may, however, suffer from problems of their own. While they should be complete, their flow may be terrible—requiring the pilot to climb in and out of the cockpit more than once, for instance, or skip back and forth across the instrument panel. More seriously, burgeoning liability concerns have come to burden them with items that can cause more trouble than they save if some later item is overlooked. When a new private pilot who had trained in another model crashed a Cessna 172 during an attempted full-flaps takeoff, for example, it was widely assumed that he'd extended the flaps during his preflight inspection and missed the call to retract them again. As it turned out, the preflight checklist for that year's 172 never mentioned extending the flaps. But later models did, raising legitimate questions about whether checking a system not essential for normal flight justifies even temporarily putting the airplane into a configuration in which it cannot climb.

Likewise, the taxi checklist for the Piper Seminole calls for checking the crossfeed position on the fuel selector valves. Aside from the inadvisability of putting the pilot head-down while the airplane's in motion, the Seminole's fuel selectors have their "OFF" position between "ON" and "CROSSFEED." The NTSB implicated this feature in a fatal crash in Florida in which the airplane took off with one selector turned off, causing its engine to quit shortly after liftoff. It's not certain, of course, that the pilot failed to move the lever all the way forward after the crossfeed check, but it's certainly plausible. Diamond's procedures for its DA40 exhibit a similar quirk. The pre-taxi checklist calls for switching fuel tanks and running the engine for at least 60 seconds, while the before-takeoff list specifies setting it to the fullest tank. There are sharp differences of opinion among DA40 pilots over whether any useful purpose is served by switching away from a tank on which the engine is running perfectly well, especially before legs short enough not to require a tank change in flight.

All these are good reasons for owners or operators to make up their own checklists instead—as are the desire to improve flow, include local specifics such as home-field frequencies, and squeeze the whole thing onto one or two compact laminated cards. Of course, doing this involves both obligations and risks. To make sure nothing's omitted, it's essential to cross-check your own version against the manufacturer's (if any) and panel placards, plus the procedures outlined in the operator's manual or pilot's operating handbook. Next it must be field-tested: first by pilots who know the aircraft well and then, after any needed revisions, by students under instructor supervision. The result should be checklists that are more efficient, easier to manage, and tailored to the details of your particular operation. The risk, of course, is that you have to be able to prove your version is functionally equivalent to the original.

Otherwise, if anything unfortunate results, you can expect it to be held against you. Some plaintiff's attorney is sure to seize on the fact that you weren't using an approved manufacturer's checklist, even if that had nothing to do with the accident.

Chapter Three: Marketing

Less really is more

P. JERRY LEE

I have to admit that I'm tired of this cliché. I've heard it over and over again since the eighth grade. In so much of our business and personal lives, the exact opposite seems to be true. An airplane that can fly at 180 knots at Flight Level 230 is better than one that tops at 9,500 feet msl and 120 knots. A six-room bungalow is better than a studio apartment. An 18-ounce New York strip is better than meatloaf. We could go on and on.

With everything in our world that points to higher, faster, farther, and *more* as being superior, when is smaller, simpler, and downsized actually better?

In our industry, we often see marketing messages as a confusing array of multiple offerings that look more like a comprehensive catalog of services rather than a singular, focused idea. Many of them will rattle on and on with a deep level of detail that requires some dedicated reading time to get through. When you engage in a marketing campaign, whether it is one that goes on in perpetuity (such as your website) or one that is finite in scope and duration (such as a spring event), it is important to keep the message(s) segmented, compartmentalized, and very brief.

- For the most part, people don't like to read anymore. If they did, the current approach that many are taking would work well. Flight schools could simply produce a catalog of courses and offerings and publish it to their website and be done with it.
- Most newcomers to avocational-based flight training don't have a high level of understanding of the product they are shopping for.
- There is so much marketing competition for our attention today when it comes to discretional spending that a muddy message just gets lost in the mix. You have to fight to get to the top of the pile.
- People want things that are easy to understand and buy. This is true even for affluent, sophisticated shoppers.

With these thoughts in mind, what can we do to change our marketing messages to current and prospective customers?

- With a finite marketing campaign, make sure you have one message—just one. If you try to offer two to three things at once, you'll muddy the effort. It is better to do one thing very well than to try and do several things on a mediocre basis.

- Express your idea with as few words as possible.
- Use high-quality pictures that include people to get your point across. Remember that the flight training business is way more about people than it is about airplanes. People and airplanes need to be included in every image that you publish.
- With a perpetual marketing campaign, these rules still apply. Just make sure to keep the ideas segmented and brief.

When you create marketing copy of any kind in the future, run them through this quick checklist.

- Am I presenting one singular idea?
- Is it published in as few words as possible?
- Is the message clear to those who don't understand my offering or are new to aviation?
- Am I using lots of quality imagery to help convey my message?
- Does this marketing do a good job of driving prospects to my front door or phone?

The goal of marketing is to drive people to your phone or front door. It's not to try to convince them to start a program or rating with you. That's the point of sales, which is a completely separate discipline.

The key problem with so much of our marketing is that it's trying to accomplish way too much at one time in one place. In a sense, many schools are trying to accomplish both sales *and* marketing with tools like their website. I guess in this case less really is more.

Back to basics

P. JERRY LEE

It's a great time of year to take stock in what your school has in the way of basic sales skills and review the least common denominators for effectively selling any service, widget, or product.

Sales, defined. Sales can mean a lot of things to a lot of people. One of the least complicated definitions of sales reads like this: *Sales is a transference of feelings.* Most

of the people your school speaks to either in person or on the phone actually want to buy your products. They just need to feel good about it. How you get them to feel about your offering is where the rubber meets the road. People come to you with a lifetime of established feelings, expectations, and emotions. All you need to do is capitalize on these feelings in a positive and professional way.

The best listeners make the best salespeople. If sales is transference of feelings, then accepting that great listeners make the best salespeople is not difficult. The problem in so many schools is that the principal people who interact with your customers are your customer service staff and your instructors. Your customer service staff is hired to work directly with customers, but they may often find themselves trying to handle multiple tasks at once, making good listening a real challenge. On the other hand, if your instructors are like so many in our industry, they just aren't good listeners. As an instructor, their primary role is to fly, teach, and talk (all at once, sometimes) in a way that is safe, legal, and efficient for training. Doing this kind of work day in and day out doesn't always lend itself well to the formation of a good salesperson.

No sale is ever final. With an attrition rate of more than 70 percent, the idea that no sale is ever final rings true for those of us involved in flight training. It is a misunderstood fact that the sales process is perpetual in most industries, and flight training is no exception. Signing a new flight student is only the beginning of a new sales process within your organization: The quest to keep and finish the student will last a number of weeks, months, and sometimes longer.

Ask for their business. Even with experienced and professional salespeople, this one often gets missed. The biggest challenges are timing the question, and having the intestinal fortitude to actually ask.

These four basics are a must for any business. They are practices that every school can adopt, and they cost very little to implement. Let's take a look at some easy practices that help make these basics happen in your school.

- Make sure your team understands what motivates people to buy and stay. Money and price are important, but I've seen a lot of schools that charge at the upper end of the norm for their region that also do quite well. What makes these schools different is that they are often very good at making the prospective customer feel good about coming to them—and they know how to get customers through the process. Remember that customers want to know how much you care before they will care how much you know, about flying or anything else.
- Using your experience with scenario-based training, set up some very basic listening exercises for your customer service and instructional staff. Design the exercises to have a measurable outcome. Conduct them over the course of three to five months.

- Slow down your conversational pace with prospective customers on the phone and in person. A slower pace of conversation both in person and on the phone gives the customer an opportunity to speak and join in the discussion, instead of being just an audience.
- Realize that your school may portray a "members-only" atmosphere to newcomers. This is common, but mostly unintentional for many schools. If you have even a hint of this at your school, find out where it's coming from and make the appropriate changes *yesterday*.
- Teach and expect your staff to *ask* for customers' business, for the next flight booking. If a mistake is made, and they feel like they want to leave training, ask them to reconsider. I think asking is often humbling because it's sometimes awkward.

The art of good sales is simple. It goes beyond industry boundaries and even most cultural boundaries. It is not hard or costly to implement. On the other hand, not engaging in effective sales is very costly. As a flight school owner or leader the choice is yours to make.

CRM means business

P. JERRY LEE

When you take the time to look at the value that CRM and a well-crafted lead tracking process can bring to your business, you'll come to realize that it's a very affordable way to increase your opportunity for new business.

1) Choose a CRM provider

When I work with clients, I often recommend the Salesforce.com CRM service. It is cloud based, widely used in many industries, highly rated, and very inexpensive. The last time I priced it, the Contact edition for Salesforce.com (their most basic subscription) is $5 per user per month. Many flight schools often do not need more than one or two users.

2) **Develop a bulletproof system for collecting leads**

For many schools, this is the key. The easy, simple, and inexpensive solution is to develop a pre-printed 4-by-6-inch note card with five or six questions on it. These questions can include:

- First and last name
- Best phone number
- Best email address
- Interested in
- Today's date
- Proposed start date

It's important to avoid asking too many questions when you gather the lead information. Once you build and print these cards, make them accessible to all staff in your school. Then, create a central repository (comment-card box) for your staff to deposit these cards once they're filled out.

3) What and who constitutes a bona fide lead?

Sometimes, this can be a tough question to answer. In my experience, here are the people that you want to build a card for, and follow-up with, in a professional and friendly manner.

- Anyone of flight training age that takes an introductory or discovery flight at your school.
- People who call your school and inquire about flight training. Let's take this one a bit further. I know that some who call your school are simply "lookie loos." If you want to filter some of these people out, one thing you can do is gauge their level of interest by asking some open ended questions, such as: "What got you interested in flight training?" or "When you get your pilot's license, what do you want to do with it?" If they have no idea as to either answer, or can't respond with a good counter-question, they may not be sincere in their interest. They also may not be very talkative, which is something else entirely. Another typical yellow flag is people who will ask the price of flight training and nothing else. A common error that many schools make is simply assuming that people who are very interested in flight training will arrive on their doorstep ready to go. Remember: *Not everyone has the same buying style.* This is particularly hard to determine on the phone. In the beginning, err on the side of allowing a new lead into the system versus culling them out.
- People who email your school asking for information. A best practice that I recommend is compelling people who contact your school in this way to use a contact form that is part of your Web presence. By doing this, you are able to capture their phone number. It's important to remember that email is a one-dimensional method of communication where things often can be misunderstood. You absolutely want to be able to contact them via phone and share with them your personal passion for flight training and aviation. It is not possible to do this via email alone.

4) Maximize the leverage CRM can give you

Once you've captured the bona fide leads, you need to get them into CRM on a daily basis. New leads are a lot like fresh milk. They'll spoil quickly if not acted upon. A best practice for this is to get them into CRM and follow up with them within 24 hours. Initially, a phone call and a thank you style email are more than sufficient. If no initial response, make it a policy to follow up with them once a week, and include this follow up data into Salesforce.com. I also recommend the "three strikes, you're out" policy. This means if you have no return phone call or email from the prospect after three weeks or three tries, cull them from your system.

For the vast majority of small- to medium-sized flight schools, the utilization of an organized CRM/lead control process can represent a real shift from how they've been doing things in this area of their business. The flight school owner/operator must be ready to develop a process that works for their school and be willing to stick to it. Many schools also should be ready for some pushback from staff and CFIs who are "used to the way it's always been done." Utilization of CRM in the vast majority of other industries who rely on a sales process to get new customers is a given. In flight training, it's very often the exception.

CRM is not designed to replace or pave over your customer database program, or any other software in your business. View it as the tip of your sales spear. It is solely for managing prospects that can come to take flight training with you.

One final thought to remember: Sales is a process way more than it is an event.

Stand out from the crowd

P. JERRY LEE

A key component of business is rising above the pack. This concept is defined in a term called "unique selling proposition." A unique selling proposition (USP) is a component of your business' identity that defines something in your offering, culture, or product lineup that differentiates you from the rest of the pack.

In my opinion, many flight schools often overlook the development of a really effective USP because they believe flight training is in and of itself patently unique. While I completely agree that flying is special, and those of us who offer it to the public are doing something extraordinary, it's still not a good reason to omit coming

up with a set of creative differentiators to make your school stand out from its competition. And by competition, I mean any other business in your community that appeals to the same kinds of demographic groups for their discretionary income.

Before we take a closer look at the development of a specific USP for your flight school, let's look at three common differentiators that flight schools try to use and how they can be improved.

"We have the newest fleet." You've made the investment in new aircraft that can operate reliably for your customers. A new fleet gives good eyewash, which is important. Also, if you have the newest fleet in your area, you will likely have the highest overall rental prices. Maybe this is unique for your area, and maybe it isn't.

"We have the best instructors." I hear this a lot. Simply saying this doesn't really make an impact on me. How do you qualify "the best?" Highest PIC time? Highest first-time pass rate? Best level of completion of a private pilot certificate with fewer than 65 hours?

"We're a Part 141 school." For customers coming to you for avocational-based flight training, I think this credential is often overstated. While it is certainly a mark of attainment in certain areas, I believe it often doesn't mean a whole lot to the average customer. Why? Unless you are completing students for a given 141 rating or program in less than the industry mean time, it ultimately won't mean much to them. Another flight school who is training under Part 61 may also teach to a strict curriculum with self-imposed stage checks, have more effective instructors, and get the same (or better) results than you.

I suspect that many schools say these things because they simply don't know what else to say. They're not bad things to say. But in my opinion, they're far from unique or truly defining of who you are as a business.

With these things in mind, let's take a fresh look at crafting a USP for your flight school with some examples that go above and beyond in showing the real value of your school.

"Our school's students have a 93 percent first-time pass rate for the private pilot certificate." Offering this statement as a USP differentiates you as a school that can get things done and can perform as promised. I would estimate that half of the schools out there don't know their student's true first-time pass rate for each rating, and most don't offer it in the sales process.

"More than 20 percent of our students who graduate from a rating or program are female." If you can truthfully make a claim like this, you'd do well to headline it anywhere you can. The subscript below the headline should read something like, "and this is three times the industry average," or a similar statistically accurate statement. Female customers are a great, largely unrepresented demographic in our industry.

"We only hire instructors who are experts at teaching you how to fly." In our industry, I've often seen CFI pay scales that are a direct function of total PIC and total

dual given. In these schools, if you're an instructor who has high loggable hours in either column, you're automatically afforded a higher per hour wage. In far too many schools, not enough thought or energy is put into hiring instructors who are good at teaching, irrespective of their hours. Offering performance-based pay for getting students done in an efficient way can help drive this.

"The average tenure of a CFI at our school is four years." Obviously, this is a difficult one to pull off, but if you can say something along these lines that is truthful, I would put it ahead of anything like, "We have the newest fleet."

"Our school offers training in a relaxed but professional atmosphere. We strive very hard to make your training both effective and fun." There is so much quasi-military mindset out there in our industry. Linear logic seems to dictate that "relaxed" and "professional" can't work well together. I completely disagree. It is my experience that most people who are over 30 and seeking flight training for avocational purposes don't care so much about the quasi-military culture in your flight school. They have enough of it in their professional life. If you haven't already, find ways to increase the level of fun in the flight training you offer without compromising safety, legality, and effectiveness. I really like this USP because every school can offer it, irrespective of their size or time in business.

These sample USPs are but a few you can use to increase the level of enticement offered by your staff, your website, and any campaigns you engage.

I encourage you to come up with your own USPs. Consider what's important to you and what pleases you when you go into a restaurant, a retail store, or your doctor's office. Put yourself in your customer's shoes and think carefully about what your school does that is truly special and unique.

In many segments of the business world, it's about who tells the best story and is most tenacious when it comes to earning and keeping customers. You don't have to be the newest, the biggest, or the best funded flight school to improve your situation. By highlighting your strengths as they relate specifically to customer needs and wants, you can work effectively toward getting and keeping more business.

Groupon's rules of engagement

P. JERRY LEE

Back in August of last year when I took my first discerning look at using Groupon as a marketing tool for flight schools, I admit I was a bit reluctant. The word on the street in most industries was that this was either a very powerful or very challenging marketing tool. Some industries raved about it. Others seemed a bit lukewarm on the whole idea.

Since the initial research in August of last year, I've come to realize that there is no one single answer as to whether Groupon is great or merely good for flight schools. I do know that it's like many other marketing tools: It depends on how you use it, and how committed you are to making it work for your school.

Here are the nuts and bolts of how a Groupon deal works.

- Groupon sends out one deal a day to its subscribers in a specific, targeted metro area. Their marketing copy claims that their subscribers are educated, upscale female consumers that have disposable income. If your school is like most, the amount of female customers you have is probably less than 25 percent. Groupon can potentially help you reach out to a market segment that is historically under-reached by our industry. Even if you doubt that female consumers are still your target market, many female consumers will have spouses, a significant other, or other friends and family members that they would give or recommend the first flight deal to.
- Groupon handles the online billing for the deal, and they pay you in a number of installments over the life your deal. For example, if your Groupon deal is valid for redemption for one year, expect to be reimbursed over that year in three or four installments. They do this to make sure that the business doesn't take the money up front, close up shop, and leave the consumers high and dry.
- The kind of deals they're looking for are somewhere in the 50 percent off range of what you normally charge for a given service, widget, or product.
- There is no up-front capital required on your part. However, Groupon will keep somewhere up to half of the price offered on your special deal. Net-net, if you normally offer a discovery flight for $99, and you offer it on Groupon for $60, Groupon will keep half of that $60 amount and the tax on the whole price. Net-net, you're getting just under $30 for a discovery or intro flight. (I'll cover more about how to offset this cost reduction in a follow-on article.)

- Your offering doesn't become active until enough people commit to buying it. Once it reaches that level (they call it tipping), those people will be billed, and they're locked in.

Now that you understand the basics of how Groupon does what they do, how can it be best harnessed to work for your school?

- Be specific in your deal. I can't stress this enough. Work closely with the Groupon salesperson to make sure your ad copy matches the letter of what you're offering. Make the ad copy foolproof, really foolproof. Misunderstandings here can lead to reverse word of mouth for your school. Not good for you. If there is an omission or error on your part in the ad, be ready to live with it and fix it.
- Consider limiting the participants on an intro flight to one individual (there may be some exceptions to this, which I'll cover later). Otherwise, you might get too many happy couples that want an inexpensive sightseeing flight rather than prospects with a bona fide interest in flight training.
- Consider limiting the age of the individual on this ride to 17 or older. Say so in your ad. You probably don't want the 12-year-old birthday ride at this reduced rate. Keeping it at a legal-to-start-flying age is a great idea. Also consider limiting the total number of participants in the deal. This is something that Groupon may or may not offer to you. However, they have agreed to do this in the past.
- Consider putting together a package deal with a school hat or T-shirt, initial logbook, and discovery flight. It's better if you do this in a way that doesn't match a current offering on your website. "It's our special Groupon package," in other words.
- If you can get Groupon to agree to send you a copy of the final ad before they publish it live, do so. This will remove the possibility for any typos on their end, and help to ensure that you are on the same page with each other.
- Make sure that you specify what your normal business hours are in the ad, and that the redemption of the special deal can only be made by appointment, and the flight is weather dependent.
- Historically, the chances for a landslide response are much greater than a no or low response. Be prepared for both scenarios!
- Finally, have a welcome package of flight training info ready for each participant to take home with them.

Next time, we'll cover the finer points of structuring a smart package offering that works for accelerating your Groupon deal, what results other schools have received, and how you can get the most from the people that come to your school to redeem their deals.

What is your market?

IAN J. TWOMBLY

To sell a product you must first have a market. Ideally one would do some market research prior to launching a business to ensure the market is there and customers will be ready to buy once the doors open. Even if you didn't conduct a market survey prior to opening, it's a good idea to revisit the issue periodically to make sure your products fit the demand.

There are two main questions that must be determined in the market research exercise—what is the makeup of the possible buying group, and what is the competition? Knowing this can lead to decisions ranging from exactly what products to offer to where to put your flight school.

Of the two, the competition is probably the easier question to answer. Web tools such as AOPA's flight school database can help you track down established flight schools. This is a good start, but not the entire picture of the competitive landscape. Independent instructors, and even unrelated activities, should be considered. If you live near water, for example, sizing up the price and access to boating makes sense. It's also a good idea to think big for flight school competitors. Although it may seem like the only competition is from another school on the airport, the reality could be different depending on what your school is offering. Accelerated training is a great example. Although some students will come from local sources, a good percentage will travel to your school. That puts other schools from around the country as potential competitors. Even "normal" flight schools compete regionally.

Figuring out potential market demand is more difficult, and something even large multinational corporations struggle with. One place to start is the Small Business Administration. The government agency provides links to demographic data, including household income, employment status, and much more. This broad information is a good starting place to get an overview of households in your region. It's also free.

The FAA also publishes free information about certificated pilots. This will give you a good list of everyone with a student pilot certificate or higher, and thus an idea of how many advanced certificates and ratings you may be expected to sell.

New eyeballs—those people who have never taken a lesson—are the hardest to quantify. Any resource you can find in terms of surveys on leisure activities, business interests, and anything else that will tell you about interest and ability, are highly valued. Conducting your own surveys or research is possible, although potentially

expensive and time-consuming. Consider linking up with a business college student for an inexpensive resource.

There are a number of online market research resources as well. Inc. has a market research primer with advice on general technique, money-saving tactics, and more. Myriad businesses offer their own advice, many of which will also sell you a turnkey service.

Most of all, don't waste your time and effort doing market research only to change nothing in your start-up business plan or your current offerings. It's virtually guaranteed that your gut instincts won't be 100 percent correct, and ignoring new information in the research makes the entire process moot.

Flight training is a niche market. Embrace it.

IAN J. TWOMBLY

Do you ever feel like you could walk in to a room with a TV on and guess the channel or the show by only watching commercials? There's a reason CNN has denture commercials at 1 p.m. and you can learn everything you've ever wanted to know about the Easy-Bake Oven from Nickelodeon at 4 p.m. Smart companies know how to reach their target audience.

The target audience for flight training is obviously much smaller than it is for the Easy-Bake Oven. But that doesn't mean the same tactics can't work. In fact, it's so much smaller that flight training is considered a niche market. Basically that means the product speaks to a small group or type of people.

To be successful in marketing within a niche market it's important to follow a few guidelines.

1. Identify the audience. Clearly identifying the audience is the first step in any marketing campaign, but especially so in niche marketing. Defining the audience doesn't mean, "people who want to start flight training." Depending on your campaign it could mean, "men between the ages of 25 and 45 who make $150,000 a year or more who own two cars, and engage in outdoor sporting activities." Or if you're going after a new subset of students it could mean, "medical doctors between the ages of 30

and 55 who live within 50 miles." Tailor the definition to the type of student you want to attract, not necessarily those are already enrolled in your school.

2. Find the audience. Car nuts love watching the Speed Channel, a small spot on the cable spectrum reserved for racing, car restoration, and everything mechanical. At least that's what you'd expect by watching the commercials. Where else do you see a car wax commercial, followed by a tire commercial, followed by an oil commercial? Those companies have found the car nuts on TV. Now you have to find the potential student pilot. There's no silver bullet here. Ask current students how they found you and see if you can capitalize. Finding subsets is easier. Doctors hang out at hospitals and office complexes, for example.

3. Tell them what they want to hear. Once you define the audience you can define the lifestyle and messaging that would fit. Hasbro would never think of marketing its Easy-Bake Oven with blue colors and skateboards. Likewise, marketing flight training as extreme or thrilling to doctors probably isn't the way to go. But describing it as a challenge, higher learning, and enabling a certain lifestyle and status will.

4. Test the waters. Not every strategy is going to work, but that doesn't mean the entire campaign was a failure. Take what you learned and tweak as necessary. Maybe the audience was right but the message was wrong. Or the message was right but the venue was wrong. Think like a scientist and pick apart your campaign to make it as strong as possible.

Limbo is profitable

P. JERRY LEE

It's a typical Tuesday afternoon at your school. The phone rings, and on the line is an eager prospect looking to learn more about flight training. The front desk person passes the baton to a CFI who is between flights, and they talk for 15 to 20 minutes and give the new prospect some kind of ad hoc spiel. If your school is like most, a reduced-cost introductory flight of some kind is offered and is often used as the cornerstone for trying to get the prospect to come by the school and see what you're all about.

Good.

This kind of introductory arrangement has been used widely for nearly 60 years in the flight training industry as *the* way to "get people in the door." In theory, it's a really solid model.

However, would you be surprised to learn that more than eight times out of 10, the CFI or staff member representing the school doesn't even ask the name of the inquiring phone prospect? What's even more stunning is that more than 50 percent of the time, that person won't even try to set an appointment to get the prospect to come in and take the intro flight, tour the school, or meet the staff.

Our industry clearly has a mindset of "if you build it, they will come." This doesn't work, and it's causing us to leave money on the table and miss opportunities with new prospective students.

Rule of thirds

When selling most any service, widget, or product, if you get in front of the right people and you have the right product offering, a certain number of them will take the product without any additional sales process. Let's call this group instant-starts. If you have a decent school, reasonable airplanes, and CFIs that have a pulse, you're already getting this group of new customers.

There's another group of prospects out there that are simply tire kickers, i.e., they're never going to start with you. They often don't have the time, energy, or funding to really get into flight training and continue on with toward the accomplishment of a rating or program. They call or come to your school and may have little more than a cursory interest in aviation.

Here's where the problem lies. Most every flight school will lump all of their prospects into one of these two categories. For our industry, there is often no in between.

There is a third, and often overlooked group of prospects out there who reach out to your school—and because they are unable or unwilling to start right away—they're often dismissed as being tire kickers. This group almost always requires process and professional follow-up to get started with flight training. If you are unprepared to effectively reach out and follow up with people who have contacted you, and shown a basic and sincere interest in flight training, then I'm certain your school is missing out business that you deserve.

Some quick numbers

Let's say as a flight school, you have four new starts a month, or about one a week. Perhaps you had 20 to 30 people call your school with a genuine interest in one month. How many of those 20 to 30 did you follow up with? If you were able to get just one or two new starts each month by conducting professional and organized follow-up, and not simply hoping that some of these people will call you back, what would that be worth to you?

Would it be worth a 20-percent increase in business?

Congratulations—You're in the entertainment business

GREG BROWN

Just what are we selling in the flight training business, anyway? And how can we better attract new customers, then meet their expectations so they'll stay with us for the long term?

If you've been following recent flight training industry studies like those conducted by AOPA, you know that our target audience is looking for adventure and enjoyment. The true importance of offering and delivering fun to our customers was driven home to me as never before through a fascinating article in an old issue of *Wired* magazine, titled, "The Pleasure Binge: In the Entertainment Economy All the World is a Play Station."

Author Michael J. Wolf, employed by the well-known consulting firm Booz-Allen & Hamilton, presents persuasive evidence of the importance of entertainment to today's consumers. Americans spend more than $480 billion per year on entertainment, more than they do on clothing! "We have come to look for the "e-factor" in every aspect of life," says Wolf. "Products ... that deliver on this expectation succeed. Products that do not, disappear... We have become a world of fun-focused consumers."

What a telling message this sends to us in the flight training business. If flying doesn't strike our customers as entertainment, they'll put their money into some other activity that does, like rock-climbing, sports cars, boats, or skiing. In fact, if you think about it, that's exactly what they've been doing in years past, some of them the most prosperous in the history of the world.

While GA flying languished and has only recently begun its turnaround, other entertainment and sports activities have been thriving and growing. Even now we are only beginning to again persuade a few prospects that flying is a legitimate investment for fun and adventure. Just how tough is the competition for our customers?

"A battle is being waged for our attention," says Wolf. We all know what's been happening with sales of entertainment and adventure products and services in recent years.

To really get on the bandwagon, we must convince prospective customers that flying offers *more* entertainment than other pursuits. Every pilot knows that's true,

but do our advertising, our facilities, and our people convey the real adventure of aviation to the uninitiated?

Just how important is the sale of entertainment to business success of our flight schools? Well, not only does Wolf imply that our success will be enhanced by selling entertainment, but he argues convincingly that failure to deliver entertainment sets modern businesses on a course to failure.

"The apparent scarcity of free time and the necessity to plan for it has the effect of upping the ante for each entertainment decision," he says. "In a time-obsessed economy, a bad movie is more than a waste of time--it also represents a major opportunity cost in terms of other fun you might have had."

How do we convince prospects that flying is the entertainment they're looking for? By touting all the fun to be had doing it. Back in the early '80s and again in the last decade, our industry went through periods of promoting practical advantages of flying—cost justification and all that. Well, times have changed, and now we must refocus on adventure activities that got shifted to the fringes of aviation marketing during that period.

Travel, adventure, taildraggers flown from grass strips, seaplanes, aerobatics, warbirds, parachuting, soaring, balloons—when you think about it, hardly another activity offers more fun and adventure to a broader audience than general aviation. Those are no longer fringe activities to the success of our business. Now's the time we *must* bring the entertainment of flying back to the forefront in every aspect of marketing and customer contact.

Nobody sums it up better than Wolf in his article: "[Today's] changed perceptions and uses of time have provoked adults into treating fun not just as a reward, but as an entitlement. They expect it to be part of the package, and feel shortchanged if they don't get it."

Right on, Mr. Wolf, for reminding us of what our customers are looking to buy. Now let's see if we have what it takes as an industry to hear what you've said, and do something about it to reap our fair cut of that $480 billion. If we in aviation can't promise and deliver fun to our customers, who can?

Secrets of successful companies

P. JERRY LEE

"It's got to be run like a WalMart," a friend in the industry recently told me. He was referring to the administration of flight schools and how they often have business practices and sales cultures that can be significantly different from many other industries. I will say that I'm very aware that there's a lot of buzz out there about WalMart, and that feelings go in many directions about their business.

Whatever your personal thoughts about WalMart are, my friend brought up a very good point: that without trying very hard we can learn a lot about improving the business of flight training by simply looking at what other financially profitable industries are currently doing, and then borrowing the best of what they do to make our industry more successful.

With these thoughts in mind, let's take a look at a few of the business development practices that are successfully used in other organizations and see how they can be parlayed into doing what we do with a minimum of effort.

Have a dedicated person to help spearhead your business development efforts.

Chick-fil-A, which operates fast food chicken restaurants in 39 states, will often have a part-time marketing person specific to an individual store to help increase brand awareness in that store's local area. This person will help coordinate everything from in-store specials and charity events to sales of large catering orders. I know that large flight schools often have dedicated business development people, but that small to medium sized schools mostly don't. With labor as one of your biggest expenses, it might not make sense to bring someone in full-time to handle only business development. However, if you can bring someone in part-time, or task an existing employee who has skills and talents that would relate well to assisting with your business development, this might be a skillful move on your part.

Consider your return on investment. If the labor expense was $200 to $300 a week extra for a part-time person, how many new students would it take to offset this cost? With the right balance, the energy you'd create around your business would far outweigh the costs.

Invest in the training of your customer service people.

Most schools have portions of their staff dedicated to answering the phone, dispatching aircraft, and dealing with the public that comes to their door. A best practice followed by many businesses in other industries is to offer solid training for

the people who deal with the public. No business (flight school or otherwise) can afford not to do this.

Think about the businesses you've been to (or have been on the phone with) that have customer service people who are empowered to do hardly anything. It's frustrating. Regular and frequent training on the policies and principles of your organization allows you to empower your customer service staff to make things right for your customers based on your school's values and principles, and to operate outside of just saying "yes" or "no" based on policy alone.

When customers leave, you must find out why.

In July of this year, Consumer Reports conducted a customer satisfaction survey. What they found was that, "Sixty-four percent of respondents said that during the previous 12 months they had left a store because service was poor, and 67 percent had hung up on customer service without having had their problem addressed." They also report that, "65 percent felt 'tremendously annoyed' about rude customer service staff." Just because your school is a small or medium sized, don't assume that some of these things couldn't be happening where you are. They're present in all business at one time or another.

Customers are expensive to get. When you lose one and don't know why, you're missing a tremendous opportunity to a) get the person back, and b) potentially improve your business so you don't lose more in the same fashion. In the flight training industry, some students will often "gray out" of scheduled lessons in such a slow way that their reduced frequency of training may not be immediately noticeable. You must build and follow a process of recognizing when someone has left (or might leave), contacting that person to learn more about his or her concerns, attempting to get the customer back, and cataloging the reasons for his or her departure.

One tool, many purposes

IAN J. TWOMBLY

When it comes to staying in touch with your current customers, reaching out to prospective students and renters, and keeping everyone engaged in the community, no tool is more versatile, more efficient, or more effective than email marketing. Using it to its best potential is easy if you follow five basic strategies.

1. Have a goal

Most important to the process is to have a goal and stick to it. That doesn't mean never revising the goal, but it does mean you give the newsletter time to mature and meet expectations. The goal should be specific to your school and your school's needs, but there seem to be a few common themes.

Sean White, a marketing professional with Montgomery Aviation and Eagle Flyers in Zionsville, Ind., said the newsletter in informational in nature. He includes flight school procedures, student achievements, and new or interesting things that are happening at the airport. The idea is to keep everyone informed and "keep the flight school in front of people." White also regularly includes events like seminars in the newsletter, which he says is the primary method of getting attendees.

A less obvious benefit of newsletters is their ability to help provide web presence for the school. Faith Drewry, the co-owner of the FL Aviation Center in Tallahassee, Fla., said increasing the school's Google search results has been a core goal of the newsletter since it was first launched. Because Google's so-called organic search results (as opposed to paid advertising) are based partly on new content on a particular site, the newsletter gave the school a way to regularly refresh the website, pushing it up the search result list. And it worked. Drewry said they are now the first results for most flight training-related searches for Tallahassee.

2. Keep it regular

Readers must have an expectation of frequency to become comfortable with a newsletter. If your school is sending an email in a newsletter format with regular sections, it's critical that the email goes out on a regular schedule, be it once a month, once a week, or something in between. That's not to say additional updates can't happen between issues, but don't skip the primary issue.

If you use email in a more free-form style, such as Aviation Adventures in Virginia, be mindful of not spamming your list too often. Owner and frequent emailer Bob Hepp says that he will send a simple email for student achievements, school news, or anything else that comes up. People on the list expect this regular communication, and therefore don't unsubscribe, he says. However, if he or a CFI hits the list two or three times in quick succession, he will get one or two unsubscribe requests, usually from someone who has moved out of the area. Setting a frequency and sticking to it will ensure you are meeting an expectation and keeping your email open rate high.

3. Segment your list for sales

If you use a third-party vendor such as Constant Contact, segmenting your email list is easy. You could use this feature to only reach instrument-rated pilots or only those who are checked out in a certain airplane. White uses it as a sales tool. The school goes to many community events. At an event they may offer a free discovery flight where entry is done through giving the school an email address. After the event, the school will email everyone from that segment of the list and offer them a

discounted intro flight, free Cessna Pilot Center kit, or some other promotional tool.

4. Make it your own

"I think your web presence is a reflection of your business," Drewry says. She has spent many hours making sure the newsletter and website reflect her school's brand, which is not coincidentally positioned in the top left of the email. When FL Aviation Center opened a year ago Drewry said they knew they had to offer something other schools in the area didn't. So they developed a mission statement that sets them apart and drives everything they do. Customers started to catch on, but she continues to remind both them and her employees (who also get the newsletter) of the school's brand and mission.

Montgomery Aviation and Eagle Flyers newsletter is also unique. Because it serves both the flight school and associated FBO it has the ability to expose the students to the larger aviation community. There's a list of airplanes for sale, and news items often include events that go beyond the scope of flight training. White has also worked to personalize the newsletter and bring it into the larger look and feel of the business.

5. Make it easy

The bottom line is that if it becomes too difficult to manage, you'll likely stop producing the newsletter. So make it easy on yourself and either use a third-party vendor like Drewry and White have, or use your internal email management system, as Hepp has done. The process will still take time, but especially with a vendor such as Constant Contact and many of the others, you don't need to know code or how to use complex analytics software, and it will automatically ensure you are following email laws.

This means there's no excuse not to put out high quality, engaging email campaign on a regular basis.

Does your school 'get' customer service?

P. JERRY LEE

So far this year, I've been traveling quite a bit. As a result, many of the customer service analogs between the airline industry and the flight school industry are now front and center for me on a weekly basis. I think most airlines are trying on some level to improve things, but most days, the best grade I can usually muster for them is a C-.

Earlier this week, I had the opportunity to travel to Toronto on a Canadian-flagged air carrier that I had never flown with before. Without expecting anything different from this airline, I was pleasantly surprised from the moment I took my seat.

Families with small children boarded first (in case you haven't flown commercially in a while, this doesn't always happen with every airline these days). The flight attendants made it a point to sit down next to each family for a brief moment and discuss what services were available on board for them. After everyone was seated, the PIC stood up at the front of the airplane where we all could see him, and took about one minute to introduce himself and his crew to us, and thank us for flying with them.

This was followed by the safety briefing, which was done with rehearsed proficiency, efficiency, and an appropriate amount of humor. The most important thing I noticed was how all of the crew had such a great positive mental attitude and seemed to enjoy their jobs so much. Even if they didn't *actually* enjoy their jobs in that moment, they did a good job of offering a professional appearance throughout the flight.

I did not see free drinks, snacks, or hot towels being handed out to try to win people over. I didn't see anything that looked like it cost money, logistical support, or an inordinate amount of time. What I did see was a culture that has invested the time, energy, and effort to make sure that the people flying with them understood that they cared and that they were happy to have their passenger-guests on board with them this day.

Sometimes, that's all it takes.

So, what can this Canadian airline teach us about how we interact with our flight school customers?

- The person at the helm of the ship needs to introduce himself to his customers at least once. It doesn't need to be a long or elaborate introduction, but it needs to be personal, sincere, and meaningful. How do you do this in your school?
- There is no excuse for a challenging or unfriendly culture in any flight school. It can often be too easy to say that you have instructors who are "just passing through" on the way to an airline or corporate job and there's nothing you can do. As the leader in your flight school, you have to make up your mind to insist that your whole team puts on their game face each and every day they come to work for you. If team members are unable or unwilling to display a positive and friendly attitude, then counsel them on your expectations. If they still can't do it, separate them from your business. No level of individual performance is worth having a bad attitude on your team. For many schools, the most difficult part of this equation is making the commitment to lead by example.
- Consider as many high-concept, low/no-budget ways that you can think of to make your customers feel welcomed and appreciated. Create a contest within your business to come up with these kinds of ideas, and offer a reward for the employee(s) that comes up with the best low/no-cost idea. Repeat as necessary.

The answer is not always money, even in aviation. Your commitment to "getting it" when it comes to your customers can cost you next to nothing, but pay back huge dividends in terms of customer retention and loyalty.

K.I.S.S. the funnel goodbye

IAN J. TWOMBLY

Everyone knows sales follows a predictable process whereby the consumer goes down the funnel from awareness to interest to desire to action, right? Not anymore.

Recently the Corporate Executive Board found in a survey of 7,000 consumers that only a third of shoppers use the funnel model on a regular basis. The reason is not surprisingly the deluge of information available to consumers. Consumers seem to be unable to find a clear path through the funnel. As a result many have replaced it with a tunnel approach.

The tunnel is just that. It's where a consumer hones in a specific brand or offering and then goes full-forward. While this might sound like great news for flight schools,

especially those without local competition, the larger story is more critical. In a time of rapid marketing, an overload of information, and a bevy of choice, the smart school makes the process easy for the customer.

Between your first contact with a potential student and the final sale, the process should be clear, direct, and simple. Everything from the messaging to the product offering should be uncomplicated. Ads, for example, should make it clear what you're selling, which is the end-product of learning to fly.

One place where simplicity is key is on the initial phone contact. The most prevalent, and probably the biggest mistake, is to invoke lots of jargon. Imagine you are about to buy a guitar. You've had interest in music, but don't know anything about instruments. You walk into a shop you found in the phone book and the guy behind the counter starts talking about "action" and "bi-amping." You'll be completely lost. Now imagine how a prospective student feels when you, an instructor, or the customer service staff talks about Part 61, CFI, and so on. Keep the conversation simple and focused on one thing—getting the prospect to the school to take a flight. There's nothing like taking your first flight in a small airplane to bring about clarity.

Once the flight is over and it's time to sell training, here again simplicity rules. Flight training's traditional pay-by-the-hour model is confusing when there's no firm answer for how long the training will take. Those few schools that offer a flat rate would argue the model is extremely effective. If you're not ready to make a major switch like that, work to otherwise simplify the process as much as possible. Bring transparency to the money discussion by talking about the average amount of hours it takes your students to get a certificate and what can improve that.

Finally, because sales in an ongoing process, make sure the training is organized, follows a syllabus, and always enables the student to know where he is in the process and where he is going.

According to the board's study, the single biggest factor in a consumer's decision on whether or not to purchase, follow through on a purchase, and recommend it to others was the purchaser's ability to get "trustworthy information about a product and confidently and efficiently navigate their purchase options."

Seems simple.

Teach your teachers to sell

P. JERRY LEE

Our industry is beginning to take a much closer look at reducing student pilot attrition rates, as well as how to get more customers in the door while spending less time, money, and effort in the process.

With these ideas in mind, one of the items at the top of your checklist as a flight school owner/operator should be to embark on gaining a full understanding of just how invested your CFI staff is in making sure that you get and keep as many students and customers as you can.

Many school owners realize (or suspect) that their CFI staff may be overextended when it comes to the areas of sales and customer retention within the business. Conversely, some owner/operators simply believe that "this kind of problem isn't happening (or can't) happen to me." Heard that attitude before? It's one of the five hazardous attitudes the FAA tells us to avoid, and it sums up much of what's going on in flight training today.

Let's look at some areas of your business where the most common problems with CFI-customer interaction are, and how you can begin to correct them.

A prospective new student calls your school or walks in

Are CFIs answering the phone or greeting these people at the door? What are they saying to them? Are they giving them their undivided attention? Have you trained them what to say or ask, and how to say it?

In market research Mach 1 Consultants has conducted, we've learned that instructors who are speaking to new prospects love to gush about everything and anything; most of which goes right over the head of the new prospect. Flight instructors do this gushing mostly because they have no idea what to say, or more importantly, how to listen well to the new prospect and get them to ask questions about training or renting.

What's the remedy? Set realistic expectations and coach your CFIs on what to say and how to listen to new prospects. Use scenario-based training (role playing) to work through getting them up to speed with this important part of their job.

Students depart, and no one knows why

"Sandy must've run out of money. I haven't seen her here in three months." "Jim makes excuses on why he can't come to training. I wasn't sure he was cut out for this, and I guess I was right."

Whether it's the economy or a student's aptitude, the excuses for why students leave is endless. In some cases the excuses are correct. But financial ups and downs and lack of aptitude don't add up to a nearly 80 percent dropout rate in our industry. Not even close. Where are more than half of your dropouts going? Do you really know? Do your CFIs know?

What's the remedy? Hopefully you've taken the time to hire competent, safe, and high quality CFIs. If most of your training and rental revenue comes from the flight training portion of your business, then the training they give is your primary product. The CFI and his interaction with your customers is something you can't leave to chance. You must have structured interaction outside of programmed testing that is built for the sole purpose of ensuring your students are happy and your CFIs are performing properly.

As head of the flight school, the buck stops with you. Early on in the relationship with the customer, you must to establish a working rapport with each student, or delegate this to someone other than their main CFI. Set the expectation early-on that you'll be talking with them often and gauging things like quality of training, compatibility with their main CFI, and level of enjoyment with their training, and that this kind of interaction with you or your designee is part of how you do things in your business. In other words, have a conversation with your customers and take the time to ensure they are happy.

At the end of the day this is a people business more than anything else. CFIs often don't come to you with a lot of sales and customer service training. They need guidance, support, and direction if they're going to become better at getting and keeping customers for you.

After the intro flight—Three easy ways to get your candidate on the schedule

DEANNA KING

I used to think flight lessons were an easy sell. Who wouldn't want to become a pilot? All it took was someone to walk through the door, take an intro flight and sign up for lessons. That was then. Today, people are selective about where they invest their discretionary income. A candidate may shop around before making a decision to buy.

Here's a familiar scenario. You're at the scheduling counter, after what you think was a successful intro flight, and suddenly there's an awkward moment. You want to secure the sale by getting your candidate on the schedule, but what do you say?

Securing a sale starts with understanding and qualifying your candidate. Qualifying begins at hello and continues during and after the flight. Your candidate must meet three criteria: time, money, and motivation.

If any of these criteria are suspect, then you do not have a candidate.

Use a consultative approach to determine where your candidate stands. This is nothing more than having a conversation, asking the right questions and showing how your services will meet the prospective pilot's needs. The strategy is not to sell flight training, but rather, to understand the reasons your candidate will decide to buy or not to buy. To be successful at the counter, it is essential that those buying reasons are understood beforehand.

For example, during the flight, you determine the candidate has the money and motivation but not the time. After the flight you might brainstorm possible solutions or share examples of other students' flight schedules. Be flexible, and offer to work together to arrive at a realistic solution prior to trying for an appointment.

Back at the counter, assume implied consent unless the candidate indicates otherwise.

- What's your time frame for starting?
- We recommend getting your medical prior to your first lesson. Let's schedule your lesson after you see the doctor.
- Are weekends or weekdays better for you?
- Is there anyone else you'd like to invite on your first lesson?
- Would next week or two weeks from now be better?

- The TSA requires proof of U.S. citizenship. Will you be able to present your birth certificate or valid passport before your first lesson?

Next, determining your candidate's financial qualifications can be touchy but there are subtle and effective ways to address this issue. Avoid, getting caught up in the "how much does it cost" question. It's on the candidate's mind, so take the lead and address it early on.

- You've probably given some thought to funding your training. Your lessons will range between x and y dollars. Are there any financial concerns that would delay your ability to start or finish?
- Are you familiar with our pilot financing program?

Finally, what about motivation? It's hard to believe, but occasionally someone shows up at your school who outwardly appears very motivated but later reveals uncertainty. Confusing? You bet. After all, when you show up at a restaurant, you're hungry and motivated to eat right away. Why would it be any different?

With flight training, candidates may be a passively assessing your school to determine if it's the right fit. The candidate wonders: Is your training "menu" going to satisfy my appetite? How will your school meet my value expectations and emotional needs? Can I trust you and your instructors over the long term? Are you worthy of my financial investment? Can you deliver? If so, support your claim with evidence, testimonials, and how you add value.

What if your candidate wants to think about it, or, my favorite, needs to "talk with the wife." Always agree, but don't stop there. Thinking about it doesn't mean no. It may mean the person is honestly undecided, may not be convinced about your operation, the instructor, the aircraft, the ability to commit, the flying, or the value. Alternatively, hesitation may be due to knowing the dream is about to become a reality. It pays to ask more questions.

- You might consider attending one of our ground schools first. You'll gain some insight and it will give you more time to think about it.
- That's understandable; let me show you our introductory packages designed for those who want to ease into training.
- Would you like to take another flight before you decide?
- Would you like to get in touch with one of our students to talk about his experience?
- I'd be happy to sit down with your family to discuss flight training.

The key to securing sales is avoiding awkward counter moments. Know your candidate's money, time, and motivation needs before asking for a commitment. Continue to qualify throughout your interactions, and make it easy for your candidate to say yes on their terms.

Help your students navigate the CFI revolving door

JILL W. TALLMAN

Hire a new flight instructor. Get him acclimated to your school's environment and customers. Help him grow his roster of students. Wave goodbye as he departs for another flying job.

It's nothing a seasoned aviation professional hasn't encountered, but it can have a devastating impact on the students left behind.

Weather, aircraft down for maintenance, money—all of these factors can impede a customer's training progress. The promise that an airplane will soon be back on the line or good weather is on its way can provide encouragement. If an instructor leaves, however, the customer may see that as the final straw—his or her dream of flight wasn't meant to be.

"I had four instructors and it was one of the reasons why I didn't finish my training," said Darryl Jordan of Madison, Wis.

Even if you promptly set up your customer with another instructor, will they work well together?

"It was never the same," said Karmen Krueger of Owen Sound, Ontario, Canada. She enjoyed working with her initial CFI, a young, confident pilot with a safety-conscious attitude. When he took another job, she began flying with another instructor who was "technically proficient" but had an awkward, "Mr. Bean" personality that she found off-putting. She stopped taking flight lessons. "I didn't want it as much."

And then there's the additional expense your customer will incur as he or she gets up to speed with another flight instructor. You know and the new CFI knows that this is a necessary part of the process; the flight instructor has to gauge the student's skills and knowledge. Your customer, however, might view it as another attempt to get money out of him—particularly if he has to change instructors more than once. And that could cause the client to take his business elsewhere.

What can you do? Tim Busch, owner and manager of Iowa Flight Training in Cedar Rapids, says he keeps turnover low by "pay[ing] them well compared to the industry standard," and by hiring individuals who love to teach and already have a non-aviation career, "so they aren't going anywhere."

He does employ young, career-minded flight instructors who trained at the flight school, but there are stipulations. “I make a two-year contract with them where they learn to teach and build time, but we plan the transition when they leave” so that no student is left high and dry.

Busch’s approach may not be feasible for everyone, but there are other measures that can help.

- **Syllabus.** If Part 61, does your school use one? There may be no more effective way to track a student’s progress. King Schools offers a free syllabus for both the private pilot certificate and instrument rating.
- **Records.**What kind of records do you keep on your students? A copy of a syllabus detailing the student’s progress would be a boon to the flight instructor who inherits the customer. Expanding on this, you could note whether the student has flown with any other CFI or other useful information.
- **Communication.** New students generally aren’t aware of the fact that flight instructors come and go. When they hire someone to do a job, they expect that person to be around for the finish. Ask your flight instructors to be candid with customers if there’s a job change on the horizon. Don’t let your customer be the last one to know.
- **Transition.** Work with your instructors to set up a plan for when it’s time to leave. Identify other CFIs who can step in. The departing CFI might encourage his student to fly with a possible replacement so as to give them an opportunity to work together. Ensure the departing flight instructor has fully briefed his replacement on the student’s progress, learning style, personality, and any other tidbits that will ease the process.

The few. The proud. The pilots.

IAN J. TWOMBLY

In the world of sales, nothing is theoretically harder than the job faced by the U.S. Marine Corps. The Marines are selling years of personal commitment, a major threat to personal safety, and strenuous physical exercise. In return recruits are paid a very modest salary, and a chance to defend their country. Against those odds the Marines

are the only service to continually exceed recruiting goals. And rather than hide the risks, they do it by exploiting the difficulty of the lifestyle. The few. The proud. The Marines.

Learning to fly isn't exactly signing up for four years of duty in the dessert, but it is a big ask. Students are expected to spend a bunch of money, fly as often as possible, and study for tests, all without a guarantee of success. Instead of shying away from the reality, we should be proud of it.

Some call this approach transformational marketing. Others might classify it as aspirational. The basic idea is that the seller is promoting to the buyer that he or she needs to work hard to achieve a goal, whether it be economically or socially. There's evidence to support that the strategy would resonate. In AOPA's research into the ideal flight training experience, respondents were asked to list the positive aspects of training in their own words. Simply learning how to fly, the challenge, being in the air alone, independence, and other words came up often. In fact, taken together, the achievement message can through on more than half of the responses.

The first solo is another step that affirms this approach. We rightfully celebrate it. And why? It's hard to learn how to fly an airplane by yourself for the first time. Even if the student has a natural ability, it takes commitment. For some, it takes overcoming fear. For others it's about a monetary sacrifice.

Your parents probably taught you the value of hard work. "Builds character," they said. We learn this message as children. Things that take effort are worth doing. As adults these opportunities start to wane. We're accomplished at work, our families are growing, and we already made it through high school, college, or post-graduate school. Flying is a rare opportunity to reopen that part of us that seeks out challenge.

That doesn't mean we should all don uniforms and salute each other. But it does mean that a marketing strategy that points the exclusive nature brings an aspirational tone to your school. The message is that not everyone can be a pilot, but *you* can. *You* can be one of the .2 percent of Americans that can fly an airplane. There is power in knowing you are part of a select group.

The beauty of aviation is that once the prospect "buys" a message of exclusivity, they'll discover a community that's likely closer and more tight-knit than their own street. Not to mention, your messaging will be setting the proper expectation of the time, money, and commitment it takes to learn to fly—another important aspect of a flight school's success.

Your business culture and your product are everything

P. JERRY LEE

I think we can all agree that many of the variables affecting the role of instructors are fixed and largely unchangeable. Compensation for CFIs can't increase dramatically without pricing yourself out of the market; the job (for many) is part time and often requires hours of unpaid activity for CFIs to get the billable hours they need.

Many CFIs walk into your door knowing your school is just a stepping stone in their career. The real trick is getting them to be motivated and on board when it comes to providing excellent customer service and doing everything they can to increase retention when they are with you.

Let's take a look at some best practices.

1. You must ensure that the person to whom your CFIs answer is completely on board with your policies and principles when it comes to getting and keeping students. My sense is that this person in many schools is practically more a part of the instructor corps than the leadership team.

2. Address the "just passing through" mindset in your first interview with them. Agree that they're likely just passing through. However, as a condition for their continued employment they have to play by your rules while they're in your employ.

3. Endeavor to stratify your CFIs as A, B, or C players and review them on a regular basis to let them know where they stand. I think there are a lot of CFIs who think that as long as they show up for work, return the airplane in reusable form, and drag their customers along to a private certificate in 80 hours that they're doing ok.

4. Offer voluntary, reoccurring unpaid training to your CFIs on how to be a better flight instructor. Two to five hours a month should be ample.

5. Insert staff other than CFIs into the quality control process on a regular basis. A quick phone call or a private 10-minute meeting with a customer at scheduled intervals during their training will ensure that the CFI is not solely in charge of customer satisfaction during the training process. It doesn't take a CFI rating to know that a customer isn't happy. Make sure that these times you spend with them are specifically set up and not just incidental to dispatch or undispatch.

6. Make your expectations for CFIs very clear when it comes to getting and keeping customers. Write them down and integrate these ideals into your company policy.

7. Make sure that your CFIs know that they are appreciated. It is often said that appreciation is the No. 1 emotional need that people have. “Hey, Sue, you got Jim Smith done with his instrument rating on the first try. Good job. Thank you.” What if everyone in a leadership role within the school told Sue that before she went home for the day? You would stand a better chance of getting Sue to understand that her work today mattered, and that she’s not just simply passing through. If you are successful at making Sue and your other CFIs feel appreciated, this will transfer through to your customers.

Remember that sales is essentially a transference of feelings. And no sale is ever final (does our industry’s more than 70-percent attrition rate drive that idea home). Your CFIs have far more face time with your customers than anyone else in your school.

Here’s an analogy to consider: If you owned a restaurant where patrons paid “by the bite” for their meal, and the vast majority of them got up and left the table before their meal was even half over, would you feel like you were doing something wrong?

Now let’s talk some more about getting CFIs to play by your rules when it comes to living sales and marketing values. The elephant in the room when it comes to hiring and keeping CFIs is their frequent burning desire to move on to Part 121 airline operations or corporate aviation. If you can successfully balance their need to move on with your need to do right by your customers today, a winning arrangement can often be struck.

- Address before hire their need for a positive work reference and letter of recommendation from you as a flight school, especially if moving on to the airlines.
- Make it absolutely clear to them that ongoing customer service and retention are a big part of their job, and these will be a part of their ongoing performance evaluations. Make these expectations crystal clear, and put them in writing.
- Offer to help them get ready for their airline interview. Assemble a quick prep course that will help them get to where they want to be, and let them know that this will be available to them when they’re ready to move on. Have your chief instructor conduct mock interviews. Execute the course in such a way that helps ensure you get the timely notice you need to successfully backfill their vacant slot when the time comes.
- Finally, develop a comprehensive business-wide plan that addresses this issue so that a team effort is made to understand where each customer is in the training process.

Unless the current model for flight training and airline hiring is dramatically altered, the variables we see today will be in place for some time. If you ignore the elephant in the room, you’re helping to enable a training culture that loses far more students than it graduates.