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Flying is Not a Spectator Sport:

Taking an Active Role in Your Flight Training

Teaching is my family profession. Though I went to the ends of the earth — literally, during my years as a diplomat — in my youthful zeal to forge a non-standard career path, I saw the family profession in a different light when I discovered the right subject (aviation, of course). Not surprisingly, I have both absorbed and independently formed a lifetime's worth of strong opinions about what constitutes effective teaching and learning.

Perhaps the strongest of these is my belief that, contrary to the way many of us are schooled in this country, effective learning is not a spectator sport. On the contrary, one of the most important

elements in education is a learner who is engaged, which means being an active participant in his or her own learning process and experience. That does not require, or even imply, academic anarchy. As one of my instructors likes to say, "You don't know what you don't know." Rather, learner engagement — especially for adult learners — implies a student who regards learning as a participatory process and acts accordingly.

What does learner engagement look like in flight training? Here are a few suggestions for taking an active role in your journey to pilothood.



Photo by James Williams

Show Up...

You've probably heard the wry cliché that 90 percent of success in life results from the simple act of "showing up." If showing up is understood in a broader sense, I'll agree that the cliché works for flight training. Here's what I mean.

First, showing up means being physically present for *regularly* scheduled ground and flight lessons. To be sure, flight training is expensive. But in my experience, both as a flight training student and as an instructor, I have painfully learned that regularly scheduled and frequent lessons are more cost-effective than taking a lesson every 4-6 weeks. Especially in the earliest stages, when everything is new and easily forgotten, frequent lessons are key to effective learning and retention.

Second, showing up means being mentally present, that is, alert and prepared. Although most of us associate homework with the bad ol' days of primary school, solid preparation is key to being an effectively engaged flight student. If you're going to ground school, there's no substitute for reading the assigned material before you take your seat in the classroom. If there are practice exercises, e.g., performance calculations, do enough to either master the material or pinpoint the knowledge gaps you can ask about in class.

For flight training, a favorite learning technique is the sandwich. The lesson itself is the meat, and pre- and post-lesson preparation make up the slices of bread that keep the meat in place. Before the lesson, mentally review the maneuvers and procedures you learned last time and familiarize yourself with the activities slated for this one. After the lesson, while the experience is still fresh in your mind, mentally replay what happened. We'll have more on that idea in a moment.

...and Pay Attention!

If 90 percent of success comes from showing up, the other 10 percent comes from paying attention. Though I'm not a parent, I sometimes joke that the flight training process is akin to compressed parenthood. Just like a parent with a newborn, the flight instructor starts with a person completely dependent on him or her for survival itself. Then, like a parent, the instructor's task is to help develop the knowledge, skills, and attitudes the student needs to safely operate alone.

The instructor clearly bears a huge responsibility, but so does the student. The actively engaged flight student needs to pay attention: Watch, listen,

and work to put perceptions from each training experience into a broader context. Never hesitate to ask questions. And, since few instructors are gifted with mind-reading ability, tell us what you see, hear, and think it means. That gives the instructor a chance to validate accurate perceptions and correct any misperceptions at the earliest opportunity.

To encourage more active participation by the flight-training student, the FAA *Aviation Instructor's Handbook* suggests a postflight debriefing technique called the "collaborative critique." In the traditional assessment we all remember from grade school, the student sits quietly while the instructor marches through a laundry list of quibbles about the student's performance. In the collaborative critique, however, the instructor guides the student through a four-step process to *replay*, *reconstruct*, *reflect*, and *redirect* the flight experience.

Solid preparation is key to being an effectively engaged flight student.

- First, the learner gets to *replay* the flight with a verbal review of what happened and when. For instance, the student might recall a directional control issue on the takeoff roll, observe that the climb was accomplished precisely at V_y , but acknowledge difficulties in holding the assigned altitude.
- Second, the learner tries to *reconstruct* specific parts of the flight by stating what could have, or should have, been done differently. In the directional control example, the student might note that more rudder pressure would have eliminated the problem.
- Third, the learner takes a step back to *reflect* on the flight as a whole. A good takeaway from this part of the postflight debriefing is to verbalize the most important lessons learned from this particular flight.
- Fourth, the learner seeks to *redirect* today's thinking and learning to the next lesson. For instance, the goal might be to take specific control actions to improve directional control on the ground and altitude control during the flight.

If your instructor doesn't use this technique, you may want to suggest it. A good instructor is always open to new ideas and techniques, but if you are not comfortable with the idea of teaching the teacher, there is nothing to prevent you from independently running the 4-R collaborative critique at the end of each training flight. The point is to



Photo by H. Dean Chamberlain

develop judgment by providing a structured framework for paying attention, assessing the situation, and validating your perceptions.

Seek Out Scenario-Based Training

Another way to develop judgment is to train like you plan to fly. If you are learning to play the piano, there will certainly be times when you can learn from practicing individual notes and scales. The goal, though, is to learn to play songs. Learning to fly has a few things in common with learning to play a musical instrument. The maneuvers you learn — starting with the four fundamentals of straight and level flight, climbs, turns, and descents — are like notes and scales. Knowing how to fly the maneuvers according to the requirements of the

Practical Test Standards, or PTS, is very important. But operating safely in the real world requires not only rearranging the basic maneuvers to

accomplish the trip or mission you intend to fly, but also flying them in the context of real world operational pressures and constraints.

That's the reason for the emphasis on scenario-based training, or SBT. Scenario-based training is a training system that uses highly structured scripts of real world experiences to meet flight training objectives in an operational environment. There are several key words in this definition. First, SBT is a training *system*. That means that the SBT concept is integrated into all phases of flight training; it isn't an activity for just one lesson or for part of a lesson. Second, SBT uses real world experiences. Instead of teaching maneuvers in the abstract, the idea is to put them into a real world context. Third, the experiences take place in the real world operational environment.


SBT promotes the development of judgment and decision-making by including the kind of con-

sequences or external pressures that the pilot will inevitably face outside the training environment. The beauty of scenario-based training is that it puts the traditional PTS tasks in the context of missions that mimic the kind of flying you will actually do.

To be an effectively engaged flight training student, you might use the SBT approach to planning your dual and solo cross-country flights. For example, cross-country flight training can be structured as planning for a family vacation that you might really want to take in an airplane. The importance of comprehensive flight planning becomes very real when you have to put it in specific terms: how many people and how many bags can be carried and how they must be loaded. In another example, the turns-around-a-point maneuver might be a lot less abstract and academic if you think of it as an aerial photography mission.

The real world operational environment leads to another important benefit of SBT: Pilots who train with SBT more quickly develop the habit of carefully and thoughtfully considering all aspects of the flight as it progresses. They also learn the critical skill of making, and carrying out, realistic contingency plans to deal with unexpected events, one thing we can always expect to see on any given flight.

To sum up, let's go back to the piano analogy. The traditional approach to flight training and testing is more like a piano recital, in which you work to perfect a specific and known arrangement. But real life flying is more like taking requests at a party. The party guests aren't going to be interested in hearing you play scales, no matter how proficient you are in playing them. And the real life operational environment is not going to let you fly very long if you don't know how to use your judgment to fly in accordance with the complex and sometimes conflicting demands of weather, passengers, mission requirements, and other factors.

If you are a current or recently graduated student pilot with tips to share on how to make training more efficient and effective, we'd love to hear them. Use the QR code for a VFR direct trip to our mailbox, and we'll print the best tips in a future issue. 



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