

Making the Grade

The four R's of collaborative critique

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Teachers talk; learners listen. I learned that in kindergarten, so it was no surprise when the instructor training me to be a CFI told me that I should talk from the minute my students arrive until the moment they depart.

Dutiful student that I was, I listened to my teacher, and learned to talk—a lot. I greeted students with a carefully prepared pre-flight briefing. Throughout the flight, I was a fountain of instructional knowledge on the maneuver *du jour*. I chattered away while we secured the airplane. Back inside, I whipped out my notes and marched efficiently down my list of the day's bobbles, mistakes, and gold stars. Only then did I invite the students to speak by asking if there were any questions. By then, of course, the poor students were so dazed and overwhelmed they wanted only to escape.

Luckily for the clients who have followed them, I eventually wound up with a student who taught me a better way. Ava (not her real name) cringed through every critique and soon became so fixated on avoiding “bad grades” that she also avoided thinking for herself. She managed to solo, but we both began to doubt that she had the right stuff to be a pilot.

The turning point came on Ava's first dual cross-country flight to a towered airport. Overwhelmed and

terrified of the scolding critique she expected on the basis of her mistakes—all common errors for that stage of training—Ava was in tears by the time we shut down. For once, I had the good sense to stow my notes and ask Ava to describe the flight from *her* point of view—in effect, to grade herself. Her self-confidence grew as she realized that her perceptions of the flight were accurate and valid. My confidence in her judgment increased significantly. Most importantly, though, I learned the traditional “teacher talks, learner listens” method of teaching and grading is not nearly as effective as an ongoing assessment dialogue between the learner and the instructor.

After this experience, I ditched the Knowing Authority method of grading and gradually developed a collaborative critique framework that involves four R's: replay, reconstruct, reflect, and redirect.

The first two steps (replay and reconstruct) relate primarily to a specific maneuver or lesson, while the second set (reflect and redirect) is intended to promote higher-order thinking skills. In fact, you might notice that the four steps of the 4R collaborative critique roughly correspond to the “rote,” “understanding,” “application,” and “correlation” levels of learning you studied in the *Fundamentals of Instruction*.

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Here's how it works:

1. Replay: *Good teachers are good listeners.* The collaborative critique starts with having the student verbally replay a maneuver or a lesson while you simply listen. According to the *Fundamentals of Instruction* (FOI), part of the instructor's role is to help students integrate their perceptions into meaningful insights. Until I worked with Ava, I made the mistake of trying to help students develop those insights from *my* perceptions rather than their own. In a simulated engine-failure scenario, for example, I was so eager to “instruct” that I would immediately share my perception of whether the airplane was too high or too low for the selected field and then suggest ways to compensate. Far more effective is to pose a simple question (e.g., “how does it look?”), listen carefully to the student's response, and

use further questions to guide the development of those all-important perceptions and insights. You might follow up on a “looks too high” response by asking the student to tell you how she reached that conclusion and what actions might be taken to correct the problem. Try it out. Rather than starting the next post-flight briefing with a laundry list of areas for improvement, ask the pilot to replay the flight for you. Listen carefully for those areas where your perceptions don’t match those of the student. Explore why it looked different to him or her. This approach will give the student regular opportunities to validate his or her own perceptions, and it will give you, the instructor, critical insight into how the student’s judgment is developing.

2. Reconstruct: *What would you change?* Have you ever flown a “perfect” flight, in which you did everything right? If you have, my hat’s off to you. If not, well, you’re probably in the majority. You might never achieve a perfect flight, but your next one could certainly be a better flight if you learn the right lessons from the one you just finished. The reconstruct stage of the collaborative critique is about having the pilot learn those lessons by identifying the “woulda, coulda, shoulda” elements of the flight—that is, the key things that he or she *would have, could have, or should have* done differently. Most pilots I know are simply bursting with reconstructions after every flight. Once you open the floodgate with a “what would you do differently” question, you will have two challenges. The first is to help organize the pilot’s responses into meaningful insights—in short,

to direct those random stream-of-consciousness observations into an instructionally useful formation. The second—and it’s a big one—is to maintain the delicate balance between helpful self-evaluation and destructive self-flagellation.

3. Reflect: *Reflective learners are effective learners.* Insights are a key part of learning, and they come from investing perceptions and experiences with meaning. This process requires reflection, in which the pilot in training relates new concepts and ideas to existing knowledge. So what is reflection, and how do you do it? I am careful in how I introduce the concept of reflection, because many pilots see it as a squishy, touchy-feely concept more appropriate to the psychiatrist’s couch than to the pilot’s cockpit. Not so. Reflection involves having the pilot explicitly identify thinking processes that you cannot see, and that she may not be aware of. A key part of your goal in this stage of the critique is to turn the covert into the overt: condense those vaporous clouds of confusion into visible moisture you can mop up with a better explanation or more targeted training. For example, I once had a student who trembled at the slightest bit of turbulence. By having her reflect on why she was so spooked by aerial potholes, we were able to isolate the specific things that bothered her and address them head on. To encourage reflection, here are some questions you might ask: What was the most important thing you learned today? (*Note: Discussion of new skills will probably dominate in the early stages of training, but listen for, and encourage, reflection on decision-making*

and risk management once the student has attained proficiency in basic maneuvers.) What part of the lesson was easiest for you? What part was hardest? Did anything make you uncomfortable? If so, what was it? When in the lesson (or maneuver) did it occur? How would you assess your performance and your decisions?

4. Redirect: *What can you use on the next flight?* The final step in the collaborative critique process is to help the pilot in training correlate lessons learned with past experiences and then consider how they might transfer those insights to future flights. For example, on a dual cross-country flight with a client last summer, the pilot experienced unexpected weather that required a diversion to an alternate airport. While waiting for ground transportation, here are some of the questions I asked to encourage “redirect” thinking: How does this experience relate to conditions you have experienced in previous lessons? Now that you have had this experience, what might you do to mitigate a similar risk in a future flight? Which elements might be unique to this flight, and why? Which aspects of this experience might apply to future flights, and how?

Many of us grew up with the “sage on the stage” model of assessment, so shifting gears to the “guide on the side” approach can be a challenge. It’s well worth the effort, though. Since life gives only the real-world test and rarely grades on a curve, collaborative critique is one of the most effective ways for both the instructor and the student to be confident a pilot has not only the physical skills, but also the self-awareness and judgment needed for sound aeronautical decision-making. ■