

### **On overcontrolling:©**

Over controlling is a symptom. A student or pilot who is heavy, reactionary, or hesitant on the controls is not yet a believer. The proficient pilot has faith in the airplane's ability to perform in a particular manner. All proficient flying is an act of faith just as is having the runway disappear during a landing.

Students do not begin as believers. The instructional process is supposed to turn students into believers. I had to fly 200 hours before I began to believe. Prior to that point I flew with a tight grip on both the yoke and the seat cushion. I tore two seat cushions out of the C-150 I learned in, because I could not accept the fact that the plane could fly without my 'firm' hand on the control. Occasionally, after a flight I would need to unwind my fingers off the yoke with my right hand. My instructors told me to relax but never showed me how to do it.

Now, I think I know how to show a student how to avoid overcontrolling. I nag at them for the way they trim, apply and take off power, hold the yoke, and see what is happening. Most of all, I insist that they let go of the yoke and try to SEE what the airplane does without their input. Initially, students lack the faith necessary to believe that the plane will actually fly without their help. In time, they will learn that the plane, properly trimmed will perform better without their meddling.

Turbulence is one of the best opportunities for the pilot to see this. The natural, normal reaction of a student pilot in turbulence is to grip the yoke more firmly. This is what you do going over chuck-holes in an automobile. In an airplane a firm grip gives you a two-for-one bump. A light touch will reduce the extent of light to moderate turbulence significantly. When students turn the plane over to me in turbulence they always contend that it stopped just as I take the controls. The real difference is that I have faith in the plane's ability to do a better flying job than I can.

If, from the very first moment of sitting in an airplane, a student is 'required' to limit his touching of the yoke to just forefinger in back and thumb in front a considerable amount of instructional time and money could be eliminated from learning to fly. Unfortunately, the student usually gets off on the wrong foot (hand). The design of the yoke with its scallops for the full fist grip leads to the belief that it is designed that way for a purpose. A student has probably been on several demo-rides where the idea is to suck the student into a flight program. The initial acceptance of a full fist grip on the demo-rides means that unlearning is going to be necessary. There is enough unlearning required in learning to fly as it is. To add the way you hold the yoke to the mix just makes the process more difficult.

I once had a student come to me with a few hours in the C-150. He had never used the trim wheel. He could fly quite well without using the trim wheel. He just set it at a level flight setting and left it there. Reducing the power to 1500 and adding full flaps brought him down to a fine approach and landing. Remove the flaps and a bit of back pressure he could climb reasonably well. No problem except that he was usually exhausted after a flight from the constant strain of holding the yoke during maneuvers. There are still pilots flying C-150s this way because it can be done and you don't mess with the trim. These pilots probably soled in ten hours or so. The shock came when they tried to transition to a more complex or powerful aircraft.

I do not teach students to fly the C-150. I teach students to fly the C-150 as though it were a complex powerful aircraft. We trim for every configuration to hands-off flight. We fly only with forefinger and thumb, and preferably only one or the other until neither are required. To fly this way the student must be taught to SEE ahead of the airplane. (See Budd Davisson's article in Dec. 1997 of Flight Training magazine pg 28-31) My first ten hours of flight training are devoted to teaching the student to SEE and TRIM the plane for hands-off flight. Not all are proficient in the ten hours but I don't solo them until they trust the plane to stay at the selected airspeed and flight path.

I once facetiously suggested that a student sandpaper his finger tips to force him to lighten up on the controls. Next flight he showed up with red, raw fingers. Didn't help all that much but I'm more careful in my suggestions now. Just finished checking him out in the C-182RG, he remarked about how stable the plane was. Interesting, how he gave the plane credit for his ability to fly hands-off. A universal comment that comes back to me from my students who progress into instrument flying, is that the instrument instructors are always pleasantly surprised how my students all have a light touch. As a school teacher, the highest praise I ever received was when a student would thank me two years after leaving my classroom.

So, what does all this have to do with overcontrolling? Pilots over control because they have not learned to SEE, TRIM and LET GO. To a degree, I cannot tell a student just when and where to look out the windshield. It is a very individual problem and solution. I can point out the necessity, and by repetition help the student anticipate the nose position, trim setting, and power for the most difficult of these configurations. I'm talking about level cruise. With practice you can do it with your eyes closed. You will need to SEE only to confirm. Then just for fun you can move your arms forward and back to initiate shallow climbs and descents. Notice I haven't mentioned the rudder. That's desert.