

### **The nature of certainty©**

In my careers as a school teacher and flight instructor I have discerned some student classifications that appear universal. There are students who make things happen; there are students who watch things happen; and, there are students who wonder what happened.

Flying is not a good place for the last category student. To the extent that a student is not self-prepared or tutored into a lesson or maneuver will be a constant state of wonderment. It is a fortunate student who has sufficient awareness to recognize his state of wonderment as a requirement for a series of questions. The wondering student needs to study learn and question his way out of that wondering state. This can best be done by having comprehensive study materials and a question/answer forum such as recreation.aviation.student on the internet. Just studying for the test NOT the way to go.

In some flight situation there is value in watching, but only if you are knowing what to watch. In making turns, you are watching the horizon and the nose relationship. In fact, most maneuvers require that you watch what is happening to the nose in relation to the horizon. The sooner the relationships are imprinted in your visual perception the better. Keeping it there is the next step of the watching process. The ingrained desire to 'see' below the nose must be overcome if the 'watching' student expects to benefit when he moves into the 'makes things happen' phase.

The best phase of learning and instruction in flying is the process of making things happen. This 'making' includes mistakes. The opportunity to make your own mistakes is of major importance. The opportunity to do something correctly is nice but the making of a mistake is a learning experience of unequalled value. Recognition of a mistake is part of the learning experience. A spiral descent is an example as is a wing drop during a stall. The process of making things happen either correctly or incorrectly is not totally up to the student. The instructor creates situations as learning experiences. Distractions for example. The instructor who allows a student to perpetuate an unsafe procedure is incompetent at least in that area.

There are teachers (instructors) who from even limited experience seem to all-knowing about all things. There is considerably more to instructing than just being able to fly the plane through a particular maneuver. The 'watching' student will partially benefit but the instructions must include where to look and for what. If this where to look and for what was not included in the pre-lesson overview then it occurs in the cockpit. The cockpit is a relatively poor place to provide instruction. The poorest examples of such instruction I have noted over the years is when the instructor accepts and perpetuates a student's perception of safety when it is less than the optimum. An example is when a recent private pilot flew me four miles from takeoff before reaching 1000' AGL. She wanted to see where she was going. All turns were at 15 degree banks or less so she could see under the wing better. (C-150) We only made one flight. She went with an instructor who accepted her way of doing things. Not the first time for me nor the last.

Poor instruction is perpetuated but so is good instruction. The normal tendency is for the instructor to teach the way he was taught. I once knew a flight instructor who perpetuated three 'generations' of flight instructors whose students consistently failed to flare to keep the nose wheel from making initial contact. Numerous collapsed nose struts

and propeller strikes were the result of this one 'old-timer'. The students loved these instructors because they could always see the runway on landing. The maintenance shops always recommended these instructors. The more the teacher (instructor) knows the less certain he is that there is only one 'correct' (profitable) solution for any performance.

Advice can be right, wrong, conditional, dangerous, incomplete, misleading, universal, or limited in scope and application. Giving dangerous advice, even with a disclaimer is quite hazardous when the recipient has no way to discriminate or associate the advice in a meaningful context. Giving wrong advice can lead to fatal results when associated with flying. If in the giving of advice, you must include a disclaimer of any sort, it is better to refrain or at least to pose it as a question.

As a teacher, I was not given to meaningless praise or reward. As a flight instructor, I judge the lesson by knowledge applied, improvement observed and satisfaction achieved. The achievement of normal expectations is viewed as acceptable but not deserving of profuse adulation. Only when normal retarded students did beyond the usual were they praised. Praise, thus achieved value by not being a throw-away for everyone. My gifted students were always faced with ever higher expectations. My standards were once compared with an ever extending extension ladder. One of my many weaknesses as a flight instructor is an unwillingness to accept from a pilot or a student less than their highest level of performance. Close is accepted only when accompanied by significant improvement. It is a pilot student that does not exceed his teacher.

Once read, that every advance by mankind has been achieved by laziness. I hate to see students preflighting inefficiently. I believe that flying correctly is the easiest way to fly. Every maneuver can be either easy or hard depending on how 'lazy' the pilot has been in knowing how to make it 'easy'. I cringe when a pilot works too hard at flying. Flying is easy only when it is efficient and I don't mean using an autopilot.

If you are a student who has a death-grip on the yoke, you are working too hard. You will fly better by learning to trim and let go. Most any airplane can be flown quite well without touching the yoke. Use the rudder. A well trimmed plane can be made to climb or descend slightly, just by nodding the head. try it. I used to call trim the power steering of flight. I was corrected in r.a.s. into calling it cruise control. Knowing what to do and when to do it allows the lightness on the controls that makes flying easy.

Even talking on the radio can be made easy. To talk effectively, you must know where you are or will be when you plan to talk. You will give your altitude as an additional warning to other aircraft. You will rehearse to eliminate unnecessary verbiage and eliminate pauses and punctuation. All the rest is 'canned', in the same informational sequence for every ATIS situation. Additional information by the pilot beyond the minimum shows the extent to which the assertive pilot is in command. You must know enough to protect yourself from ATC mistakes.