

THE INSTRUCTOR

by Ironsides

[with contributions from Skip Pothier]



[This is a video of an instructor and his student trying to dig out the student's plane after it augured in at full throttle from 200 feet]

You went through the Wings Program last flying season and are a reasonable pilot. You are very grateful to the instructors in your club who gave of themselves in order to bring you up to Wings Standard. You feel the urge to give something back and think that you should now become an instructor this season. Do you really recall what you went through?

It was intimidating the first time you showed up at the field for training. You had signed up at a club meeting and gone through all the paperwork, but that was a couple of months ago. You didn't know anyone at the field and you stood around not sure of what to do. Fortunately, somebody from the club recognized your lost puppy dog look and came over to talk to you. In the ensuing conversation, it came out that you were very proud of the trainer you had put together and were just straining at the bit to see it fly. But, there were a bunch of other hopefuls there as well and you had to cool your heels for a while. Finally, an instructor came along and introduced himself and said that he had to check out your plane. Five minutes later your hopes were dashed as you got the list of fixes that had to be made before any flight would be possible. You went home and whittled away at the "no-nos" and came back the very next training session. This time you had learned the lesson and you were there 30 minutes early to get to the head of the line.

This time another instructor was in charge and he had a look at your plane and found other faults the first guy hadn't even mentioned. He handed you off to a ground instructor who offered to help you fix things up. Of course you had none of the right tools so you and the ground pounder spent time going from member to member trying to scrounge the tools and pieces. By now your anxiety level was sky high, other guys were flying and it seemed that you could do nothing right. After about an hour of fiddling, the instructors were satisfied that your pride and joy was ready to fly. Problem was that it was now too late and they told you to come back next time. As you drove away, you noticed that you were tired and that the urge to fly had lessened somewhat.

The morning of the next training session dawned bright and clear without a breath of wind - it looked like it was going to be a great training day. By the evening training time there were showers and gusts in the area. Undeterred, you packed up your gear and trundled off to the field. You got there to find only two or three trainees huddled under the sun shelter with not an instructor in sight. You all waited an hour and finally gave up when no instructors showed up.

The next Saturday morning you went back to the field and there was another instructor who you had never seen before. He introduced himself as Joe and asked if you were ready to fly. He helped you start the engine and gave you about 153 tips in rapid fire that you forgot about 3 seconds after he told you

because he was going fast and there was a lot to tell you. Nodding your head obediently you said you got it all and the instructor taxied your machine onto the field. He gunned the throttle and pulled it into the air.

Then followed a stream of muttered "somethings" as your craft wallowed all over the sky. The instructor was holding the transmitter up high in front of him and sliding trims left, right and centre. Finally, things settled down and the instructor landed your model and put it in the pits. He then explained, or tried to explain that there was a whole bunch of adjustments to make to the control surfaces and he handed you off to the ground guy. For the next half an hour, you took the wing off and twisted and turned and forgot which way to adjust things and just got thoroughly confused. Notwithstanding, the experts were finally happy and the aircraft was pronounced fit for training.

A lot of trainees quit right here. They had hoped to have a ball playing with their new toy. They found out that it wasn't that easy and decided that RC cars would be a lot more fun - not anywhere near the hassle and nobody to tell them what to do!

You did not give up and finally had your first flight. Joe took you up and handed control to you at "three mistakes high" where you could only just see that it was an airplane rather than a hawk. Joe kept urging you to keep it steady and every time you tried it went the wrong way, turned turtle and threatened to commit suicide. Joe kept trying to help, but after three minutes your brain went to mush and you couldn't do a thing. Joe brought it home and told you what you had done wrong, but you didn't get it at all. You were exhausted.

The thing that really got to you was that you had to make all these mistakes in full view of the public. The humiliation of being such a klutz in front of everybody was very intimidating. There were many times when it was your turn to step up to the flight line that you would just as gladly have gone home. You longed for the day when you and your favorite instructor would be there all alone. It never happened; you had to screw up in public!

Over the next couple of months, you went to the field for every training session. The number of instructors dropped dramatically after the first couple of weeks. Now you had to wait in line for an instructor - too often you got the guy who was a superb pilot but just could not explain what he was doing. He was also a bit twitchy and snatched the plane away from you whenever you got into the slightest bit of trouble. Towards the end of the summer, you somehow learned how to land without smashing the plane to pieces and they gave you your wings.

Two weeks later you went out flying solo, had severe brain fade and pulverized your trainer. The frustration, shock and embarrassment were overwhelming. What a dumb hobby!

An old timer, who had been watching from the shelter ambled up and offered to go out into the bush to pick up the pieces. All the way out he told war stories of the various beauties he had smacked into the dirt. You just wanted to pick up the valuable surviving bits and get out of there. But the old-timer told you it was important to get all the slivers because it was easier to glue them back together than to start over with a new plane. When you both got back to the shelter, the shock had worn off a bit and others were doing a post-mortem to help you figure out what had gone wrong. You knew there was nothing mechanically wrong, you had just had a bad case of "dumb thumbs". But the guys played the game and

it slowly emerged that everybody had crashed and that it was just a part of the learning curve. You went home sadder but wiser. Fortunately your spouse was sympathetic. You decided to rebuild.

Over the next few months at the field flying your slightly heavier, but trustworthy trainer, you noticed that a few pilots seem to carry most of the instruction load. You also are aware that many others have instructed in the past, but they don't offer their services anymore. In casual conversation, you find out that burn out is very high in instructors. You also hear that many guys never really mastered the art of flying until they taught others. It seems that the moments of terror honed their skills. It seemed as that there were pros and cons to being an instructor.

At this point, you might be wondering why we went through that painful walk through memory lane forcing you to think about what you felt as a student. The reason is quite simple. If you forget how a student feels, then you will not know how to overcome those feeling of inadequacy, fear, frustration, intimidation, humiliation, dejection and hopelessness. Your job will be to convince the student that these obstacles can be overcome by the application of discipline, practice and routine.

What does it take to be an instructor? First, you have to sincerely want to teach others the fun of flying, second you have to park your ego and third you have to be prepared to learn how to reconquer the fear of flying. By "reconquer the fear of flying" - if you thought you were scared as a brand new student, just wait until the first time that you have the full responsibility for a starting student who has just spent six months building his trainer!

Being an instructor is not a power trip or even a badge of flying prowess. Some of the best instructors are the quiet guys who couldn't do a rolling circle if their life depended on it. The good instructor is a natural teacher who just cannot abide the thought that others can't learn how to fly when all it takes is a ton of patience and some good luck.

Being an instructor is a position of honour and responsibility. You work for no pay, except the look of gratitude flashed your way when a student gets his wings.



As a group, instructors help set the tone of a club. A student learns from and emulates instructors and their actions from the outset. Instructors who are respectful, polite and civil will instill a similar behaviour in the student. The field is a very democratic place where wealth, status and age are largely irrelevant. It is a "first name" place where good manners go a long way and memories are long.

The paramount duty of an instructor is to be safe in the pits, to fly safely, to instill that ethos in the student and to mercilessly stamp out any cowboy antics in the pits and in the air. The other club members want and need graduates from the Wings Program who are very conscious of safety.

Before you ever take a student up, ask one of the current instructors to be your guinea pig "student". You will be amazed at how different it is to fly a "student" instead of yourself. You quickly find out that you have to fly ahead of the student, that you have to anticipate what they will do and what they will do wrong. You have to have your thumbs ready to recover from the most incorrect thing the student could possibly do - right, because that is exactly what happens. The second thing you discover is that you cannot relax for a second - a 10 minute training session is about three times as tiring as flying yourself. You are on edge the whole time!

Students are scared most of the time. When they aren't scared, it means they are worn out and don't really care what happens! When their plane is airborne, they squeeze the living devil out of the transmitter knowing full well that if they ever stop pressing hard, the plane will lose its lift and plummet to the ground. It doesn't help if the instructor is doing the same thing - only one squeezer required. The instructor has to impart confidence that the student's plane is going to come back in one piece, even though it has flown a flight path that no python could replicate.

So, the instructor needs to develop that calm, deep "Air Canada" pilot's voice. "Ladies and Gentlemen, we are at 30,000 feet, we are heading to an unknown destination with no fuel and we don't have a clue where we are - never fear, Captain Canada is here!" When the student goes inverted at 5 feet off the deck, it does not help if the instructor lets out the loudest epithet ever heard; "Oh Dear!" will suffice as the instructor smoothly takes control, puts it back straight and level and quietly announces, "Yours!", and struggles to get his heart rate down from 250 beats per second.

One of the keys to teaching flying is to tell the student what the level of expectation is for the current session. It is a wise idea to severely limit the content until the student has progressed quite a bit. Early flights need only be, "We are going to go up and when I hand you control, I just want you to do figure eights concentrating on keeping the same altitude throughout the manoeuvre" - sure - like you can do it yourself!

When you finish a session with a student, make sure you debrief them. Try to do this out of earshot of others. Be encouraging, but be frank. Pick up the student's airplane and show how it reacted to the false inputs that resulted in the near disaster. The student needs to form a 3 D mental image of the situation and words alone won't do it. The aim is not to embarrass, it is make sure that the student understands.

A sensitive instructor will try to find any possible excuse to praise a student for any progress. Equally, he will try like the devil not to be too critical of mistakes as a student's ego is a very fragile thing. Other than dangerous safety issues, if the student messes up, it is probably better to say nothing or make a light joke of it. Make sure you celebrate with your student the significant milestones on the way to those wings.

Instructors forget how tiring it is for a student. Anywhere from 3 to 5 minutes is quite enough for the neophyte. At the mid-level, about 7 minutes is adequate. Rarely will a student learn anything after 10 minutes - you are just wasting fuel, wearing yourself out and cheating the next student.

An instructor has to build a trusting relationship with students. The students have to believe that you aren't going to horse their plane around, that you aren't going to take their plane up just to show off and

put them down and that you will always protect their fragile egos. Lose that trust and you are useless as an instructor.

The pits are a frenetic place. Ever notice how everybody wants to talk at the same time, even though somebody is maxing out an engine ten feet away? Here's something to think about from a student's point of view. All that noise and all that babble are invading a brain that is desperately trying to absorb the last lesson. Students suffer from an incredible information overload. We are all so anxious to tell them all we know - at the same time - that they just cannot absorb it.

As you get deeper into instructing, you start looking at the theory of learning. For example, you discover an interesting school of thought that mechanical learning follows a predictable path. According to the theory, each time a student comes out, we should teach only one skill. So, if John is ready for landings, all we do is shoot approach after approach. When John goes home, he is told not to try to learn any other mechanical skill that day - no going to the golf driving range to tune up that #3 wood! John's brain took that image of the approach and stored it in an area of the brain that is strictly temporary storage. Over the ensuing eight hours, the knowledge trickles from the temporary to permanent storage area. Just like a computer memory chip, if a new skill is introduced, temporary storage gets dumped and the new skill overwrites the approaches. Intriguing, but you could never prove it one way or the other.

You aren't going to be prepared for the first time your student goes solo. First of all, the tendency is to just keep training: it helps to have a Chief Instructor to oversee training and to force things along a bit. When your student steps up to the line all alone, you won't be doing anything else but watching with every sinew as tight as a drum. You are going to fly every second of that trip, your stomach will fall out with every miscue, and the landing - well, you might just pass out! When he brings it back to the pits, make sure you are there to congratulate him - and yourself (silently)!

Some students get very lazy. They cannot be bothered to show up for the club designated training times, so they just go to the field with their trainer on a nice sunny day knowing that instructors will be there flying their own planes. It is a great mistake to train students who show up on a catch-as-catch can basis. If no prior arrangements were made and mutually agreed upon, the best thing to do is refuse to train outside club times. If you take on all comers, then you might stop going to the field just because you don't want to be bushwhacked.

Some students become quite dependent on the instructors. They show fair skills but seem to balk at any idea of going solo. The hardest thing for an instructor to do is force the fledgling to leap out of the nest. The best thing to do is to compare notes with the other instructors. If they all agree that the student should be going it alone, then it is best to tell the student straight up that you are going to take them up but they are going to do all the flying. Don't abandon the student physically, make sure you stand close enough that your physical presence can be felt - but, let the student do it, even if they crash. The apron strings have to be cut one way or another.

As in most situations in life, some things don't quite work. You will run into the student you cannot teach and some students will not be able to relate to your style. That's fine. Any club should have a stable of instructors so that both sides of the equation can find a fit. Don't let your ego get in the way if it doesn't work out with a certain student. Both of you should move on.

Many clubs reserve specific times for training only. This usually results in a "peanut gallery" of those who don't instruct, cannot fly because of the reserved time, but are willing to volunteer all kinds of help and advice to both students and instructors. This does two things. It confuses the student if what he is hearing is out of sync with what the instructor is saying and, if the comments come while the student is in the air, serve to have the student and the instructor lose focus on what they are doing. It's the price of democracy - many voices not necessarily saying the same thing. You might be able to take the more vociferous aside and explain that the relationship between instructor and student is a special one that should be left between those two individuals. Tell them that instructions from others tend to add to the student's confusion more than assist in the early stages. Equally, you should make sure that the student realizes that, while all the cooks are trying to help, too many cooks spoil the broth.

Instructors must be careful or they will burn out. You might find out that, even after easing into the instructor role, you just cannot get relaxed. Walk away, you weren't meant to be an instructor, you aren't doing yourself or your students a favour. However, if you can become established as an instructor, you will tend to take on more and more. That is, when only a couple of instructors turn up and there are twice as many students, you fly students back to back without a break. The brain can get quite fried if you don't take a rest between flights and pace yourself.

Finally, the day comes when you simply cannot face the idea of taking up another student. Fine, just take a break - a long break. You should sit out an entire training season to go back to your own flying and have some fun. You have tried something that a lot of other pilots have never attempted. You probably improved your skills immeasurably, saving airplanes that were in the most ridiculous positions, and you developed a knack for noticing the most minute nuance of an airplane's performance that allows you to trim it far better than most pilots. Most of all, your confidence level is sky high - you can fly without even thinking about it. Your stamina in the air is phenomenal - when you first started out, five minutes was a very long flight. Now you can fly as long as your battery pack holds out.

To all those who have instructed, thank you for your contribution to this great hobby!



Comments gathered from a posting of this article on RC Canada thread :

<http://www.rccanada.ca/bb/viewtopic.php?t=7247>

Excellent article. I am printing out this article and giving a copy to each instructor in our club, which will be a must read before the first student of the year.

I have been an instructor for 8 years now and I love it. This article brought back many memories of my own personal experiences as an instructor and I believe I have been through the whole gamut of feelings as related here in this article. There were times I couldn't get enough and times I wanted to pack my bags and run. But I didn't, I couldn't! To me one of the most important statements made here was, to be an instructor you have to "want" to instruct, for all the right reasons. I have had the privilege of training at least 40 different students over the years who went on to successfully get their wings. Every one of them were different in their attitudes and abilities and all were a joy to instruct AND I learned from each and every one of them.

One thing I think that is important to relay to every single student is that as much as they enjoy the lessons and appreciate what I do for them as their instructor, that each and every one of them teaches me and that I have this remarkable feeling of joy that they give me watching them progress into a competent and SAFE RC pilot. It is their skill and abilities that get them their wings, not me! And I don't expect any student to become the best RC flyer in the club as long as they are one of the safest!

My number one rule to each student is simply "Listen to your instructor" and if you don't understand something, ask for clarification! And as an Instructor I try not to just give instruction but to take the time to explain "why!" I clip articles, draw pictures and sit down and talk over the lessons to give students that necessary "why", and they will learn!

And as the above article pointed out very nicely, an instructor with the right attitude and who wants to be an instructor, will do what it takes for the benefit student, not to bolster his own ego! In conclusion I would like to relate just a brief experience:

I had one student a few years back who was so enthused and excited about learning to fly. He was one of the most astute students I have had to date. From start to finish, he got his wings in just over a month and realized that his learning was just beginning. The day I presented him with his wings, man, I was so proud of him!!! He and I had an excellent rapport, I could be very serious with him when needed and I could joke with him as a friend. I pinned his wings on his shirt and congratulated him for a job well done! He turned to me with a silly smile on his face, looked me right in the eyes and trying to get a reaction from me said: "You know something? By next year at this time, I'll be a better pilot than you!"

I smiled back and said: " That is a great attitude, good for you my friend, and I'm sure you will be!" He looked at me kind of puzzled and asked: "That doesn't bother you that I said that?" I said: "Absolutely not, that's all any teacher can hope for..... that one's student goes on to excel and becomes the best he can be! And the day that you take the world championship, I'll be there as proud of you as I am right now telling everyone in sight ... I taught him how to fly!"

Yes it's a tough job and a great responsibility being an instructor but the rewards far out weigh any of that. If you've ever thought about becoming an instructor, just do it. New people coming into the clubs are the future of the club and instructors are always needed and appreciated. The more instructors there are the less chance there will be burnouts and the strength of the club will keep increasing.

Fly safe and happy landings!

Gary Maker
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At the Windsor Sun Parlor RC Flyers most times when a new student makes contact they are directed to me as the chief flying instructor. I will help them choose the right equipment and guide them to several suppliers who not only have excellent prices but good support afterwards. If they have purchased equipment they will get additional help as required with assembly and set up. There is never any need to go into the "Only if you had asked someone first". We just start at this point and work towards success. I personally like to go over each aircraft showing the new person for the first time how to properly set up and assemble their new project. Most times all it requires is a brief explanation and they go home on their own and complete the tasks. Sometimes it takes a little more effort, but the end result is worth it. Take someone through the steps of setting up a C of G once and chances are you will never have to do it with them again. Every student is invited to bring their project as often as they wish so I can inspect and discuss their progress. The end result is, when it comes time for the first visit to the flying field, they will be flying. I try and make a habit of taking students up for their first flight or two as it gives me a chance to match students and instructors for best results. For instance, someone who is so nervous his knees sound like a Mariachi Band I would not put with a first year instructor; there are several unshakable experienced guys instead. We have a very successful student program and this year, thanks to input from the Ajax Club, we have a complete buddy box system for every radio type. This should raise the comfort level of student and instructor significantly.

Dennis Pratt