

Of culture, catwalks and models in ATC initial training

By Max Bezzina

In this article I will look at learning the ATC culture during initial training and the corresponding role of the instructor.

BUT BEFORE I BEGIN, A SHORT PREFACE:

Of knowledge and culture:

We could say that to be successful in a particular field one would need a combination of ingredients, rather like a good balanced recipe. These ingredients are:

- knowledge of what needs to be done,
- knowledge and application of how to behave in the environment and
- good doses of luck, audacity and timing.

It would be very interesting to have a look at how luck, audacity and timing play their role in successful ATC, but that would need a separate article with a focus on "The other factors" (maybe in a future edition of Hindsight?). In this one I will focus on the first two points on the list which, for the sake of brevity, we could call:

- **Knowledge** what I referred to as 'knowledge of what needs to be done' and
- **Culture** (short for: "understanding and thriving in the culture") which I referred to as 'knowledge and application of how to behave...'

Whereas knowledge could be considered as a 'hard' component - you know it and apply it or you don't,

culture is softer, and the subtleties of behaviour are harder to teach and/or learn.

Of learning:

In any learning activity there is both formal and informal learning. We could say that formal learning is what is contained in a training syllabus and therefore what will be formally taught in a training establishment. Informal learning, on the other hand, is what a person learns that will help them in the tasks they are to carry out, but which is not itself part of the syllabus.

To illustrate the four items above, if we consider a student learning how to drive, then:

- **Knowledge** is what the student knows in terms of traffic signs, right of way and of handling of the car.
- **Culture** is how to stay calm (or lose it), how to behave in traffic jams or in busy parking lots, when to use or not to use the horn, etc.
- **Formal learning** would be what the student learns from the books and during the practice hours with their instructor.
- **Informal learning** would be what they learn (or shouldn't learn) by observing their father drive through the years.

ATC training

If we apply all the above to initial ATC training, we see that in terms of formal training, we have many hard objectives focusing on the knowledge component – e.g. all the basic subjects like Navigation, Meteorology, ATM, ... (with the exclusion of Human Factors) and all the procedures in the Rating part including most of the practice in the simulator. At the end of this, the student who passes will "know what needs to be done", will obtain a student licence and will be eligible to start unit training.

Formal learning in terms of culture is mainly covered in the Human Factors modules and in others dealing with the professional environment. These modules teach how to "behave in the environment" and include some application through role play and familiarisation visits.

This is already a very good start, but since the ATC culture is very rich, in my opinion one can do more – and in many schools actually more is done. In the definition of ATC culture, I would include amongst other aspects how to behave in an operations room, how to work in a team, safety culture¹, and the concept of service in terms of efficiency and order.

Teaching the culture improves safety awareness and safety. And who needs to transmit all these softer elements of behaviour and attitude? Well, the instructor.



In terms of a training organisation, it is never too early to introduce as much ATC culture to students as possible. It is true that initial training is detached from the operations room and that there are still training phases later on, such as the on the job training, when the student will have the opportunity to learn culture. However, from experience, on the one hand students are eager for information on how it will feel to work as a controller and are sponges for behaviours and attitudes (good and bad ones) in the ATC world and on the other hand having the students already assimilating part of the culture as early as possible is of great benefit for their understanding of what the ATC world is about.

Culture can be transmitted during training in a number of ways, a couple of which are:

- imitating the real environment whenever it benefits training and
- raising awareness amongst the instructional team, especially the simulator instructors, about their function as role models for the profession.

In the rest of this article I will develop on these two aspects which in the end are intrinsically linked with one another.

1- how a controller behaves professionally to ensure that while he or she is working, safety is facilitated at all times and that the system within which he or she works maintains an adequate level of safety or improves it

Imitating the environment

When imitating the life environment during training, it is important to keep the balance between two things:

- On the one hand that students are still learning and therefore that it is normal to make, and learn from, mistakes, and
- On the other hand that even though they are working in a simulated environment, there is a certain degree of seriousness and responsibility and that everyone needs to do their best to ensure safe services.

On other aspects, the same should apply: If it is forbidden to use mobile or smart phones in an operational room, the same should be applied in a simulator. If it is good practice to be at least five minutes early for a hand over in the operational world, then it is also positive to teach the student punctuality, the time a good handover needs, and the need to be there a little early so that their colleagues can have a full and well deserved break. Students should be taught not only the hard and fast procedures (knowledge) but also how to address and talk to colleagues, adjacent centres, pilots and others. They should not only be taught how to execute a procedure, but also that they are part of a safety chain and that there are defensive ways of controlling that will strengthen that chain. They should learn that proce-

dures are there for a reason and that the justifications for bending or omitting them are very rare if not non-existent....Teaching the culture improves safety awareness and safety.

And who needs to transmit all these softer elements of behaviour and attitude? Well, the instructor.

The instructor as a role model

As mentioned in the example above, a lot of what a new driver has learned is what he or she has observed their parents, senior siblings, or significant others doing. It is like that in all aspects of life; our children do what we as parents, what society at large, what elder siblings, what TV and what cinema do. Our culture is taught informally through observation, trial and error. There are some who learn quickly, some who learn even more to the extent of manipulating others or of challenging the status quo, and others still who never learn and end up in trouble.

Now, ATC being quite a closed environment, all that parenting, sibling, cinema and TV, especially in the early (but often super intensive) days of initial training is condensed in the few instructors who have lived in and are part of the ATC culture that the students can interact with, observe and scrutinise.



Of culture, catwalks and models in ATC initial training (cont'd)

So it is very important that we instructors are aware of our role and that while walking on the catwalk we need to act as positively and as naturally as possible.

What follows are a number of areas where we instructors, apart from teaching hard and fast procedures, need to be aware of our role in passing on ATC culture in the knowledge that we are ourselves being observed for such behaviour.

Setting limits

It is very important that we instructors set limits to what is and is not allowed in a simulator, both in terms of controlling traffic and in attitude and behaviour off the mike. We also need to be aware that we are under observation as we interact with our colleagues, on how we treat diverging opinions with respect, on how we correct mistakes, on how we follow rules.....

In terms of safety, for example, it is of benefit, as I commented above, to allow the student to try out new things and to push his or her limits, however this should never be to the extent which gives the impression that everything could be tried out and that everything is allowed; after all ATC training is not a video game, even if it may look like one to someone who knows nothing about its culture and goals. I am a firm believer that safety as a paramount priority, and

that in our job we cannot bring aircraft too close together, must be transmitted at all times to students.

On the same theme but outside of the immediate operational environment, we as instructors are being observed for our attitude in the simulation room: arriving late, excessive talking or laughing during an exercise should be stopped both for students and for us. ATC culture does not allow that.

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Teamwork

Teamwork is another area where the instructor is being observed. In training theory we insist a lot on the necessity of good teamwork, both between controllers in a unit and between all those involved in the chain. Not all students come to training with an innate disposition to working in a team and the idea that a team will help them and will improve safety. Some have individualistic traits that need to be curbed. In addition to teaching procedures, we should observe and correct the attitude of students to one another and to other people in the environment such as pilots or assistants. Also, charity begins at home and we are part of that chain and we also work within a team. We should not forget that how we relate professionally with

others, such as pseudo pilots or administrative members of the team, is being observed by our future controllers, who are registering: "This is how a real controller behaves".

The "In the real world we do it differently" syndrome

Students look for guidance from instructors on how to apply the procedures they are being taught.

Some instructors feel the need to go further than simply teach procedures and it is of great benefit for a student to work with an instructor who explains the background as to why a procedure exists and to explain the links and rationale between procedures and how we use these with real traffic. I remember to this day an instructor on my initial ATC course who would take time to explain to my colleagues and I how he had used a certain procedure on a given day and why it was very convenient for him to know it. He was patient and a good story teller. He used to make us feel like we were already working with him in the ops room.

On the other hand, there are only a very few things which are worse than an instructor telling a student that 'in the real world' things are done differently and that a procedure is only being used for 'school purposes'. The contextual difference between the application of a procedure in an academy and in operations is considerable, but instructors need to understand that a student who has only a few months' experience in an academy and has not yet worked in operations cannot fully understand this context. Running before learning to walk is as illogical as trying to teach complex operational contexts to students who do not have the experience yet to appreciate them.



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Boredom is an Instructor's worst enemy

Students are still learning things instructors (should) already know. Students are still pushing their traffic threshold; ours should have already been pushed up. Students are seeing an exercise for the first time: for us it is maybe the tenth or twentieth time we are seeing the same exercise. The student is performing; we are observing.

All the elements above mean that our mental activity rate is many times slower than that of the student. This is part of training and part of our job. We should never try to make things interesting for our benefit. We should not, for example, ask the students to try new things that they have not covered. We should not, as mentioned in the part just above, oblige the student to do something in a different way to that which they have been taught already if the main reason for doing this is not for their benefit but for

us to moderate our boredom. We need to remember that students have a very limited set of tools in their bag and they are still learning how these tools fit together. Adding more new tools to it will not make them better or quicker, it will just overwhelm them. It will give them the impression that you are teaching them a completely different thing to that taught on the course and we risk creating an impression of conflict between our team of instructors. It reflects badly on us as a team and on our message of teamwork.

Nor should we fall into the trap of showing disinterest or fall asleep during an exercise (like one of my instructors used to do sixteen years ago when I was a student – I still remember it!). Before we reach that point, it is time to move on in our career and do something else!

In conclusion

in this article I have tried to highlight the fact that ATC culture is something that ATC training professionals should be aware of as something to actively teach because it helps students to make sense of the working world and of its modus operandi. Teaching culture is not achieved mostly through formal training, since knowledge about a culture only goes some way, so the main way is by being immersed in it. Culture is soft and informal. We instructors are the ones who are best placed, in the first days of a controller's career, to begin developing awareness of this culture. This needs to be done by being clear on the behaviour expected from the students and by being prepared to correct and comment upon this and by being aware that instructors are role models and that our behaviour in the simulation is being scrutinised by our future colleagues, who would like to look a bit like us!

Before I close I would like to make a point on one final cultural trait – Professionalism. ATC is a profession which we should be proud of. As instructors we are the initiators (I intentionally did not write bouncers!) into the profession for all the students who eventually will become our colleagues. We need to carry the banner of our profession high. We should never talk down our profession, and when we need to criticise things (since the right sort of criticism is healthy) we should do so constructively and in a way which can be understood by students with only a few months of experience. The analogy might be like talking about feelings to a six year old. We also need to implicitly pass on the message to our students that they have made the right choice, that they are in a great professional environment and that it is good to be in ATC. The best way we can communicate this is with the message which is written all over our body.

