



Remote Possibilities

In the wake of the pandemic, training organisations have had to cater for an increased demand of remote training solutions. **Mario Pierobon** looks at what is on offer.

While the trend for remote training had started before the pandemic, the widespread adoption of remote is bringing new means of training delivery to develop critical mass. Virtual classrooms indeed force a training organisation to cater for the trainees' needs and workflow in creative ways.

Skyborne Airline Academy in the UK set up a web portal called Skyborne Virtual Airline Training Platform (VATP) to ensure that its cadets could continue to receive their airline transport pilot licence (ATPL) ground school lessons from home. "The aim was that the cadets continued to develop the skills and knowledge ready for when core flight training could resume," said Ian Cooper, Skyborne Chief Operating Officer.

Skyborne's portal uses video conferencing, along with document and screen-sharing capabilities to create a virtual classroom that students and flight instructors can check in to every day at an agreed time.

"It is approved by the UK Civil Aviation Authority, with all tuition counting towards the 750 hours of theoretical knowledge training our EASA Integrated and Modular ATPL students need to complete," said Cooper. "Social distancing measures meant that during the UK lockdown our students were unable to spend time in our Boeing 737 MAX and AL-42 simulators at our Gloucestershire Airport HQ. To counter this lack of simulator time and to prevent 'skill fade', our instructors have been filming themselves flying in our simulators and talking through key instruments and procedures. These videos are then saved on our training platform for our Skyborne ATPL trainees to watch in their own time."

According to Tim Nickel, Head of Flight Operations Academy at Lufthansa Aviation Training (LAT), remote training solutions at this stage are not going to replace the training ses-

sions in the simulator. "However, adding remote training solutions to the training schedule of a trainee is beneficial since they enhance knowledge retention and therefore help the trainee to prepare for the simulator training," observed Nickel. "We see a big plus in remote solutions supporting effective training. Due to the regulatory and individual airlines' requirements, simulator training is the essential part for each trainee. The airlines of the Lufthansa Group provide their pilots with a training schedule that goes beyond the scope compared to what is usually required by authorities."

Remote training for pilots currently involves computer-based training (CBT) or video conferencing, which is completed at the pilot's pace and in the comfort of his/her own home environment. "It has its limitations in that the study or refresher training is completed solo. This will be sufficient for background training and for systems knowledge improvement. A team runs a flight deck, so the only true training is completed as a team," said Michael Ryan, Head of Training at BAA Training. "All team training is completed in the classroom or in the simulator. Remote training can improve knowledge only. Performance, skill and competence will need to be trained in the classroom

Above
Flight school
graduation
celebrations may
be delayed, but
schools are filling
the gap with
innovative remote
learning.
Image credit:
BAA Training.

and simulator as a team. Skill fade depends on the individual's expertise and competence. An experienced pilot will have a slow rate of decay of skill while an inexperienced pilot's skill will decay rapidly."

Attentive, Engaged?

The use of remote training solutions bears some challenges when it comes to making sure that the participants are actually participating and that they remain attentive and engaged. These are all defining aspects of a positive learning experience.

"The only way a trainer knows that s/he has communicated with the audience is through feedback. How does one know the audience is going to be attentive? Easy. One has to tell them there is an exam at the end with a high pass mark and the participants will take copious notes and be thoroughly engaged. This is the 'stick' approach to training," said Ryan. "However, if one engages with his/her students and impresses the value and necessity of the training, this 'carrot' approach to training will be more beneficial. There needs to be a set of procedures and protocols established first so that the participants are fully aware of their commitments."

Recent EASA guidance for allowing virtual classroom instruction and distance learning has given some structure to remote training. "But the only proof that remote training has been an effective tool in keeping the attention of the participants is when the examinations are completed and the students achieve their type rating or pass all their examinations at the first attempt. A gauge of the standard and quality of the student will then be reflective of how attentive and engaged the participants were," said Ryan.

Cooper observed that Skyborne's cadets have adapted well to remote learning. "With their ground school syllabus already downloaded to iPads, at home they have been keeping up the routine and discipline we had already seen from them in person," he said. "The delivery of teaching during remote learning is faster, and we have worked hard with our instructors to slow

down the pace to ensure online teaching is digestible and that trainees are fully engaged. One of the biggest changes we implemented early on was to split our teaching into more bite-size chunks, interspersed with breakout sessions and questions and answer time. This helped boost concentration and to keep conversation flowing for each topic."

Skyborne uses Bristol Groundschool training software for its ATPL programmes, including regular progress tests. "While physically distanced from our trainees, these tests mean we can continually monitor their engagement and review how prepared they are for their exams. If their grades highlight areas where they may need more time or support, we can schedule individual sessions. Every week, we also survey our trainees to gather their feedback on what is working and then adapt next week's lessons accordingly," said Cooper.

In the experience of LAT, remote training solutions also work well when set up as virtual classrooms. "The design of the format, which we have tested extensively, especially during the lockdown weeks with groups of trainees of our Flight Operations Academy, featured not only one virtual classroom but also additional breakout rooms," said Nickel. "The latter allow trainees to work on individual assigned tasks in smaller groups, whereas the results are then shared and discussed in the virtual classroom, moderated by the instructor. We have seen a strong engagement rate. The trainees felt motivated and obliged to tackle the tasks with seriousness and enthusiasm."

Missing the Physical Element

According to Ryan it is down to the instructor and how dynamic and resourceful s/he is to capitalise on the functionalities of remote training solutions to foster an interactive learning environment, given that there is no physical classroom. "To communicate and have involvement from the student body, when there is no physical classroom, requires innovation and thinking externally to solve problems," he said.

Cooper observes that people react differently when they are



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studying remotely – one cannot always read the body language and it can be harder to engage or ask questions. “We found that by keeping content manageable, our instructors and cadets engaged with each other more. Our virtual lessons have retained many aspects of face-to-face teaching, with questions asked throughout to monitor the understanding of our trainees,” he said.

“During this period, we also used Google Classrooms to supplement group lessons with valuable 1-to-1 time. If a cadet wanted to run through in more detail a meteorology class covering cloud formation, for example, they are sent questions before talking through a worksheet on a video call with their instructor. This session would test their level of understanding and knowledge, ensuring they were on track to maintain their grades and progress through the course.”

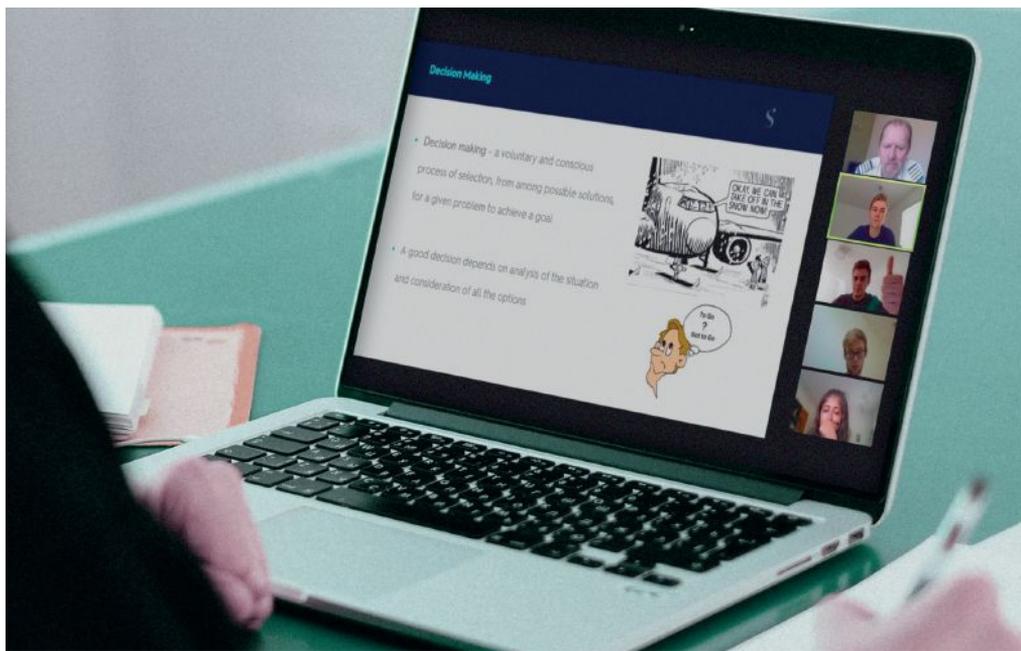
Outside of teaching hours, Skyborne also held movie nights with an educational slant for the trainees. “Our students are tasked to watch the same aviation-inspired film, before answering questions about the aircraft’s performance or use. The quizzes are fun, but they also get trainees thinking and recalling information from their ATPL ground school lessons,” said Cooper.

“It is essential that the remote training solution is easy enough to handle, that the rules on how to work with it and use it for working with others are clear and that the instructor keeps an eye on the activities and jumps in as both a moderator and driving force. All these aspects contribute to creating an atmosphere that allows an open dialogue and keeps up the good, motivated spirit among the trainees,” said Nickel.

Unexpected Realism

Group exercises are meaningful in the remote training mode and there are specific ways they should be conducted.

“Group exercises are doable within the format frame, i.e. the remote training solution has to have useful tools to communicate easily with one another, browse through relevant documents, a feature helping to put brainstormed ideas visually into perspective, etc. The mixture of tasks and dialogue, all being clearly addressed and moderated by the



instructor, are important for the trainee’s overall experience,” said Nickel.

According to Skyborne, virtual learning will not replace the value of face-to-face contact, particularly in pilot training, where one is developing the student’s character and work ethic as well as their practical skills and knowledge. “Teamwork is incredibly important during our Integrated and Modular ATPL programmes, so we have been keen to continue some group exercises remotely,” said Cooper.

Adaptability and innovation are key to success in remote group exercises, as they can be difficult to manage as well as conduct. “The instructor or facilitator needs to use the group exercises that best suit the remote environment,” said Ryan. “There are many team icebreakers and energisers that are promoted on the internet. It is then down to the instructor to be inventive in using an exercise that suits the group. One of the great learning points for aviation from the remote training group exercise is that many times in emergencies the groups are not together in a room and have to communicate through various mediums (radio calls, ACARS, satellite phones, etc.). The remote experience can add a sense of realism to this training.”

Skyborne trainees have led presentations in distance learning for their instructors and fellow students. “For many, this is the first time they have presented to a group and it forms part of their knowledge, skills, and attitudes training in developing their confidence. But it is also about ensuring our students are interacting and engaging with the topics covered in their ATPL ground school, even while these lessons are taught virtually,” said Cooper.

“This experience has taught us a lot about how we can enhance our offering through technology, and we will be taking elements from our Skyborne virtual classrooms further to enrich our training package going forward. This will include giving students access to pre-recorded training videos online, so they can reinforce what they learn in the classroom with supplementary learning and revision in the evenings and weekends.” **cat**

Above
Within one week in March, Skyborne Airline Academy set up its Virtual Airline Training Platform (VATP) so cadets could continue to receive ground school lessons online.

Image credit:
Skyborne Airline Academy.