

Flying High with award winning e-learning at E-FLI



Introduction

When E-FLI collected the gold for Excellence in Production of Elearning Content - Private Sector at the 2009 E-Learning Awards, most people would have been excused for asking 'who'? After all, this is a niche product built for a specific industry, and they were up against a host of well known names. Although the E-FLI story may be a little different to most other elearning content stories, there's plenty to be learned from it. It's perhaps even more interesting because it was made outside of the bounds of the established elearning industry, and so was created without any preconceptions.

At the age of 24, Holly Budge was already an experienced skydiver, and was working in New Zealand as a free-fall camera woman, when she spotted a gap in the market for skydiving training.

Skydiving is an adrenaline fuelled activity and a high pressure learning environment; partly because of the rigour required to meet the standards set by the qualifying authorities, but also of course because of the potential consequences should something go wrong.

A New Approach

At the time, the usual approach was classroom led training based around very text heavy manuals, and that just didn't seem to fit with the kind of people that skydiving would appeal to. They didn't want to spend hours sat in a classroom; they just

wanted to get on and learn how to jump out of a plane. What they needed were flexible resources that they could access anywhere.

Holly found herself wondering; what if the same content could be delivered in a way that was more interactive and engaging? Something that was more appealing to the type of people that wanted to go skydiving, and the way they wanted to learn. To make sure students could access it wherever and whenever they wanted to; the goal was to create something that would be delivered online.

Of course, it's important to acknowledge that E-FLI doesn't and cannot replace an instructor, and it was never intended to. Sky diving has to be learnt by doing, and that requires the support of a highly skilled instructor. The goal was to create something that would reduce the amount of classroom time, and free up more time for practical experience.

Getting started

The main problem Holly faced was that whilst she had a vision of what the solution would be, at the time she didn't have the skills to produce it. Undaunted, she returned to the UK where she completed a degree in Interactive Media at Bournemouth University, as part of which she built the first version of E-FLI as her final year project. This involved not just the technical and design aspects, but also research into learning styles and the general principles of elearning.

The content of this first version of E-FLI took the United States Parachute Association syllabus as a starting point and then built upon it based on feedback from subject matter experts. This was a long, labour intensive process, but ultimately the involvement of the right stakeholders from the start paid dividends in the quality of the final product.

This early version won awards for multimedia production, so it was clearly recognised as a success from a technical and design point of view, but to be a genuine success it had to be marketed to the skydiving community.

The initial launch took place at the Parachute Industry Association symposium, an annual event in the USA attended by E-FLI's target audience. The initial response from skydiving schools was very positive, but many of them expressed concern that it was too generic in its approach. It is critical that what's taught is accurate, as it really could be a case of life and death, and for that reason there are standards that all skydiving schools adhere to. However, no two companies teach the same way; some variances being based on a straightforward preference for a particular approach, and others by physical variances such as terrain and location. It was clear that for E-FLI to be a commercial success it was important to go away and build a version that could be customised.

The initial interest in the product was sufficient to attract funding, and this meant that the redevelopment of E-FLI was very different to the original one person effort. The technical development was carried out by a digital agency in Bristol and Holly went from being the developer to subject matter expert and project manager, although she did remain very hands on, and did in fact work full time from the design agency's offices.

Continuous change – customisation and personalisation

Over 9 months, E-FLI was redeveloped to be a fully customisable platform, with the majority of the content now being dynamic. This isn't just about branding though, individual schools can upload photos, maps and other local content.

This new version of E-FLI consists of a series of key modules, based around the learner experience. To address that initial challenge of creating something that will appeal to skydiving students, and therefore skydiving schools, the content is highly interactive, has very rich visuals and is accessed entirely online.



Hi, Dropzone

log-out

CANOPY CONTROL

LESSONS

- Equipment
- Aircraft Safety
- Exiting Aircraft
- Aircraft Emergencies
- Freefall Theory
- Freefall Manoeuvres
- Deployment
- Malfunctions
- Canopy Control
- Glossary

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Basic Canopy Aerodynamics > Forces of Flight

RAM AIR INFLATION

Pressurized Airfoil

FORCES OF FLIGHT

Ram-air canopies are made of a series of inflatable cells, which are inflated by the relative wind flowing into the leading edge of the canopy. The top skin is designed with a convex curve, which means the air flowing over it is forced to travel faster than the air flowing under the lower skin. This difference in air pressure causes lift.

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Figure 1 - example lesson



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Turbulence/Obstacles

Buildings

Avoid flying too close to buildings as they pose many dangers. The two main dangers are, impacting the building and being dragged off the building afterwards.

If you cannot avoid a building, tuck your elbows in against your chest, put your hands holding steering toggles in front of your face and put your legs out in front of you to prepare for a Parachute Landing Fall (PLF). Flare at approximately 10 feet (3m) above the building. For students jumping with a Dual Handle System, pull you

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Figure 2 - example lesson

The use of rich media has made it much easier to explain potentially complex issues; for example by making use of 3D models to demonstrate body positions, rather than an instructor attempting to do the same thing by drawing a stick man on a blackboard. This ensures consistent delivery, irrespective of school or instructor.

As previously mentioned, the intention was always to complement and improve existing training, not replace it entirely. This second version of E-FLI was designed to easily integrate into current courses, and actually allows schools to insert their existing content such as documents, images or PowerPoint slides. This answers the key challenge identified in the feedback from the initial launch; the ability for schools to adapt E-FLI to suit their offer.

The extent of the customisation is one of the things that makes E-FLI stand out from most other elearning solutions, irrespective of the topic. Every learning module can be edited from a control panel using simple drag and drop interface built in Flash. This is particularly important for elements such as dealing with malfunctions, which are quite sensitive.

Schools can make adjustments based on their location; they are able to modify the drop area students see by uploading aerial images; they can also overlay flight patterns based on local conditions, and these can be adjusted for wind direction and speed. All types of equipment, from aircraft to parachutes can be modified.

Evidence for Change – Impact & Benefits

E-FLI was re-launched in the US in 2009, and this time got a resoundingly positive response, particularly because they had responded to the feedback they had been given. As a result they were able to secure contracts to supply sky diving schools around the world. In addition, although the target was the civilian market, the military has been one of the most enthusiastic adopters.

Both schools and students have been enthusiastic adopters for the same reason; students spend less time on the ground and more time in the air. That's good for schools because students pay per jump, so there's a direct impact on revenue. It's good for instructors because more practice improves safety, and their experience so far has been greater activity and fewer incidents. The feedback from schools is that by using E-FLI they are reducing the time to competence, because students are better prepared when they arrive in the classroom.

Of course it's good for students too because they get to jump sooner and more often. It's particularly helpful for weekend jumpers who are learning over a period of time, as it keeps them refreshed between jumps. They have access to the content for twelve months so can continue to refresh their learning after the initial training.

The E-FLI product continues to develop based on ongoing feedback, but they have also begun work on another application based on a similar model. This latest product will act as an engine that can be easily adapted to cover different topics, the first of which is likely to be scuba diving.

Top Tips for developing e-learning for tricky topics!

1. It's certainly easier to change things when planning, but it's important to be flexible and continue to make improvements even after the programme is built.
2. One person can't be the expert at everything, so surround yourself with people who are experts and collaborate with them.
3. Give everyone the chance to help in shaping things. If you're working with multimedia developers, remember you hired them for their skills, so don't just get them to build to order, get their input.
4. Get more informal feedback earlier on. You may have a vision of what you're setting out to produce, but taking the time to understand what people really need and how they will use it can save a lot of time in the long run.
5. Be hands on in the production phase, because that's where the vision becomes reality.