e-Learning update

Most readers will be familiar with the term e-learning and indeed many will have experience of e-learning as either learners or teachers. Many definitions exist but in this article I regard e-learning as technology enhanced teaching, training or learning.

Ophthalmology is a technology rich profession and so it is particularly apt that we use technology to improve delivery of training in the new curriculum and then expand to include lifelong learning based on that experience. New trainees joining our run through training have limited or no previous ophthalmology experience, but they are all computer literate and have had experience of technology enhanced training as undergraduates and in foundation programmes.

Heads of school and programme directors are charged with the delivery of training. Our aim is to assist with this by developing a vehicle for delivery of knowledge and information, setting national standards and reducing duplication of effort across the country. Trainers are already busy delivering work-based assessments and practical supervision, and could do with not having to spend time in repetitious didactic delivery of knowledge - the principle should be 'do once and share'. In this area e-learning has a number of advantages which include 24/7 access so sessions can be completed at convenient times which will become more important as the effects of the European Working Time Directive are felt. It can also provide reinforcement of knowledge by self-assessment methods and can be seen to adhere to national standards.

The current College e-learning project is a collaboration between the College and e-Learning for Healthcare (e-LfH), a Department of Health programme working in partnership with professional bodies like RCOphth, developing online learning to support medical training. The Ophthalmology project is called Eye-Site and it will have a number of strands.

Knowledge-based Sessions. The initial plan is to develop modules of knowledge- based sessions supporting the learning objectives of years one to three of the curriculum. These sessions are being designed to support practical local training in an enhanced 'blended' approach (even the most ardent supporters of e-learning understand that online learning must be complemented by practical face to face instruction). Indeed some of the instruction will be delivered in a distributed course model, whereby the didactic knowledge-based material will be available online supporting locally-delivered practical courses. The prototype for this approach is the current basic microsurgical skills course held at College: candidates are expected to complete the knowledge sessions before attendance at the course, where their understanding of the issues is tested and challenged thus allowing more focused instruction and longer practical sessions. The initial courses will be Laser (including safety), Refraction, and Community Ophthalmology and more are planned. In addition to the learning materials for trainees there will be online support for trainers who organise and teach these courses.

All the knowledge sessions will be accessed via the new e-Learning for Healthcare Learning Management System (LMS) called Clix. Users will not only have access to the Eye-Site material, but also appropriate content in the wider system, including generic and professional skills material and some parts of other specialist curricula.

The sessions will be developed by expert authors sourced from the ophthalmology community who will develop the clinical content for sessions and then will work with e-LfH instructional designers to produce the interactive e-sessions.

The *Ophthalmopaedia* is a vehicle which has been developed by e-LfH to deliver structured knowledge bites of information combined with images in a less formal way than the knowledge-based sessions and will complement the material in the LMS. Articles can be authored by ophthalmologists at all stages of

training, with appropriate supervision for trainees. It works in a similar way to a *Wiki* in that it is self populating by the community who use it but unlike a *Wiki*, it is a professional product. The *Ophthalmopaedia* will be edited and moderated. However like a *Wiki* it will be fast and responsive with regular updates. Each article will have a lifetime and be subject to review. Authors may volunteer or be commissioned by the editorial team and 'ownership' of a subject may pass to a new author if appropriate. The *Ophthalmopaedia* is capable of hosting 'images' which may include pictures, video and even animation. We intend to use images to enhance articles and it will be available through e-Learning for Healthcare to NHS employees and NHS-based College Members.

The editors for *Ophthalmopaedia* will seek appropriate sub-specialty assistance in the review of articles, and will be able to guide authors in selection of suitable templates for their work, which will include references and further reading guides. Hyperlinks to further material can be used.

The project expects the *Ophthalmopaedia* to become a ready reference source, and host to many valuable assets for training and development purposes. The goal is to complement textbooks and journal articles by taking advantage of the medium to deliver images, videos and animations and up-to-date articles. As part of the development of this resource we plan a 'slide rescue service.' So could you donate your 35mm slide collection currently languishing in a drawer somewhere to College for this project? If so, please contact the project via the website.

The Validated Case Archive (VCA) is now in an advanced stage of development. The rationale for this is to use the electronic medium to hold an archive of cases demonstrating the depth and breadth of experience in ophthalmology. The four initial specialties (ophthalmology plus pathology, radiology and dermatology) are 'image intensive' and suitable for teaching image interpretation skills through this medium. Cases will certainly include rare conditions, but the bulk will be more common cases, demonstrating the variety of outcomes and management experience met with in everyday practice. It is hoped that trainees will be able to use the archive to gain an understanding of the possible outcomes, management options and subtleties of ophthalmology, while improving and testing their knowledge of the specialty. Of course, we will all have access to the whole archive.

Case authors will be consultants, trainees and permanent staff. All cases will be validated by an editorial group, with consent or anonymity ensured. Cases will be suitable for use in a number of ways. Individual learning will be enhanced by viewing cases in 'quiz mode' where the diagnoses and other information can be initially hidden. Group viewing and discussion of cases will be possible through an 'offline viewer' (cases must be kept within the archive for reasons of data protection and confidentiality).

Case based discussions between trainer and trainee may be facilitated by use of the cases within the VCA. The trainer might suggest cases for discussion in a situation where more experience is needed, or where a suitable 'live case' is not available.

Addition of rare cases to the archive could also contribute to the level of knowledge within the community, since journals tend to accept the first such case and reject subsequent submissions. Thus we miss out on the outcome data for rare conditions not managed in super-specialist centres.

It should be noted that a commitment to a certain level of support from each specialty will be required before e-LfH agree the substantial finance required to develop the software for the VCA. This is a once in a lifetime opportunity and I hope for the needed support. The benefits of Eye-Site are that all the materials will be validated by College and supported by the e-LfH system, with an approved consent and data protection policy, and plans to ensure ongoing technical and educational support.

We definitely plan to assess the educational benefits and effectiveness of the system as it is developed, and have the generous offer of help in this from one of our lay advisers who is a professor of computer science.

This system has the potential to revolutionise training in ophthalmology, allowing trainers more time for hands-on training, reducing repetition, securing and improving standards, sharing the effort and realising the potential if we do so. What is certain is that this will not work if only a handful of people are involved. Initial interest has been good and we hope to include everyone who wishes to be involved. Colleagues have generously offered to include their own projects, offered help in development of sessions and articles, and offered in excess of 10,000 images so far! Please contribute in every way you can, so that this system can flourish and provide a valuable resource for the current and future generations of ophthalmology trainees. Please visit *www.eye-site.org.uk* and contact us if you would like to get involved.

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