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# Learning Without Limits

## Massive Open Online Courses

*HealthManagement* interviewed FutureLearn's Director of Partnerships about what Massive Open Online Courses mean for healthcare professionals and organisations. And University of Twente ultrasound educator Jordy van Zandwijk shares their experiences of offering ultrasound education via FutureLearn.



**Mark Lester**

Director of Partnerships  
FutureLearn  
London, UK

mark.lester  
@futurelearn.com

@FutureLearn

futurelearn.com

In recent years, access to online learning has expanded through provision of “Massive Open Online Courses” (MOOCs). These are courses of study made available over the Internet without charge to a very large number of people, who only need Internet access to be able to participate.

*HealthManagement* spoke to FutureLearn's Director of Partnerships, Mark Lester, to find out more.

### Can you give us an overview of the history of FutureLearn and its objectives?

FutureLearn was formed in December 2012 by The Open University and is now the largest Massive Open Online Course (MOOC) provider in Europe with over 6 million people signed up from over 230 countries around the world.

FutureLearn's educational approach is centred on a social learning pedagogy, which puts knowledge sharing and discussion between hundreds of learners at the core of the educational experience. In essence, it is proven that people create meaning for themselves through conversation rather than simply consuming content. This makes FutureLearn courses especially potent for healthcare subjects, as courses facilitate extensive inter-professional knowledge transfer, as well as introduce a strong patient voice into the discussion.

Courses on FutureLearn also aim to incorporate distinctive storytelling techniques, guiding learners through a narrative composed of bite-sized videos, articles, case studies and interactive exercises that make learning engaging. And courses on FutureLearn can be enjoyed on any device, so learning can be organised around a professional's busy lifestyle.

### What's involved for an organisation interested in producing a course for the FutureLearn platform?

Universities and organisations are able to produce a course on any topic they like—we're open to all course proposals from partners. Partners are thoroughly trained in FutureLearn's educational approach and receive ongoing best practice advice from FutureLearn and its large network of partners. Once a proposal has

been submitted, the institution will develop the course and can consult a FutureLearn partnership manager in the design and delivery of the course itself. We will guide partners in every aspect of the lifecycle of a course and apply agreed standards to ensure courses live up to quality aspirations of the entire partnership.

### What are the most popular healthcare courses?

The most popular courses tend to be those with relevance to the public. We have had significant uptake of our courses on mindfulness (<https://iii.hm/bdw>), mental health and wellbeing, and food as medicine. Other courses that do well among practitioners are ones dealing with major medical emergencies, such as Ebola and Zika, courses dealing with mental illness, such as dementia, and courses on quality improvement.

### How do you measure success for FutureLearn courses?

As courses are mostly free to access, we measure success in terms of learner engagement and Net Promoter Scores from surveys of learners. We're a social learning platform, and this approach delivers significantly higher levels of engagement and completion from students. On average, 44% of people who start a course and actively participate make a comment alongside the course content. We are also undertaking studies to demonstrate the impact of courses on learners' knowledge and behaviour. Research with learners taking courses for professional development shows that not only has knowledge improved post-course, but that the learning impacts positively on their effectiveness in their role.

### How do you vet courses and ensure they are up to standard?

We have established a quality assurance process, which every course has to align to in order to be published on FutureLearn. The course criteria is based on pedagogical, technical and business requirements, a process which has been well-received by partners. We have a close relationship with our partners; courses are

reviewed at every point of the life cycle and partners have access to dashboards and data as part of ongoing evaluation of their course.

### **What is the take up in low and middle-income countries?**

We want to give as many people as we can the benefits of great learning, making education accessible to anyone, anywhere. Learners have signed up from over 230 countries around the world and whilst we have a strong following (around 1.3 million learners) in the UK, 77% of our learners are based in countries outside of the UK.

For example, during the latest outbreak of Ebola, the London School of Hygiene and Tropical Medicine ran a course on the disease, and almost 2% of the 18.1k enrolments in the first run of the course came from Sierra Leone, one of the worst-affected areas. In the latest run of the course, 16% of learners were based in Africa.

Learners from low-income countries are still a minority on the platform, largely on account of the difficulties in accessing the internet, English language proficiency, internet speeds and the cost of data. But we hope to see participation rise over time as those barriers recede and as more courses emerge that speak to the direct needs of learners in those countries.

“ COURSES FACILITATE EXTENSIVE INTER-PROFESSIONAL KNOWLEDGE TRANSFER, AND INTRODUCE A STRONG PATIENT VOICE INTO THE DISCUSSION ”

### **What are the limitations FutureLearn has come up against in its healthcare online learning courses and how have they been overcome?**

The limitations at this point are purely technical in terms of supporting some of the teaching methods one might find in traditional classroom environments, such as scenario-based activities. However, we are working increasingly with the Learning Tools Interoperability (LTI) framework, a facility to enable FutureLearn to embed learning activities hosted elsewhere within FutureLearn, which will begin to address these challenges.

Technology is constantly evolving: medical education is already seeing students learn from live 360 degree broadcasts of surgical procedures, and haptic technology is offering possibilities for virtual procedures.

So in time, there may be more that FutureLearn can support that today we might never have believed to be possible in an online environment.

### **Which types of healthcare topics are feasible for online learning and which areas will FutureLearn not deal with? We imagine you can't treat all subjects the same way.**

There are many topics that can be delivered online for health practitioners. We have clinical courses on topics like medicines adherence, antibiotic resistance, Gram-negative bacteria, dysphagia, and responding to crises such as Ebola and Zika; we have courses on health technology such as ECG assessment and genomic medicine; there are quality improvement courses such as using data to improve outcomes; and we have courses that help practitioners working with dementia patients and supporting people living with long term conditions. We also offer a range of courses for the public on topics like mindfulness, obesity and looking after your liver.

Courses less likely to be delivered online are those requiring hands-on clinical practice. While we are seeing huge advances in simulations and virtual reality, these are more difficult to achieve online and for practitioners are better undertaken in a real-life environment.

### **What sort of feedback have you had from human resource departments, heads of training and staff at healthcare facilities about the option of FutureLearn for training?**

We have had very positive feedback from HR departments and staff at healthcare facilities. Private hospital groups and NHS trusts have been inspired by the social learning pedagogy of the platform, as well as the high-quality user experience we deliver. Hospitals have purchased vouchers for their staff and recommended our courses to staff. Testament to this is the fact that Health Education England, the teaching arm of NHS England, has joined as a partner to deliver courses on FutureLearn, along with other respected institutions such as the Royal College of Physicians, in addition to most of the top medical schools in the UK and around the world.

### **What lies ahead for FutureLearn for healthcare courses in terms of growth, new markets, general development and new subject areas?**

Healthcare will remain a core focus area for FutureLearn. We see tremendous need around the world to train healthcare practitioners at scale. Many countries in the developing world, such as India and China, have major shortages and must train hundreds of thousands of staff in a cost-effective way. Even in the

U.S. and Europe, critical shortages of nursing staff and GPs exist that require affordable methods of education. FutureLearn is looking to support governments, regional health systems and individual healthcare trusts address their challenges, either using courses available on the platform or developing custom courses delivered privately to staff across organisations.

But besides the demand for new staff, health systems are faced with major technological trends, such as genomic medicine, big data and nanotechnology that will revolutionise diagnosis and treatment. We see opportunity to assist governments and health providers address the skills needed in these emerging areas. ■

## Teaching Ultrasound Imaging Online

### The Educator's Viewpoint



**Jordy van Zandwijk**

Technical physician  
Researcher and teacher  
University of Twente  
Twente, the Netherlands

j.k.vanzandwijk@utwente.nl

@vanzandwijkjk

utwente.nl

#### Why did you decide to offer this course?

A major reason for developing this course was to share health-related activities at the University of Twente, specifically our experience and research with ultrasound technology. We wanted to transfer the philosophy that having both clinical and technical knowledge in the (daily) use of medical technologies can optimise success in clinical practice. We wanted to make people excited about the technical and medical aspects of ultrasound, and to train our own educational team in the use of novel digital learning environment tools.

#### How have the faculty found it?

We enjoyed the project a lot as this was the first time our faculty had developed an online course at such a scale for such a broad audience. Our own clinical and technical educators were all enthusiastic about creating materials for learners interested in the topic. The beautiful thing here is that the materials we produced could also be used for our own students, or to support clinicians in their local practices.

Furthermore, thanks to the course, all educators and education experts involved now have more insight into the possibilities and challenges of using digital learning environments.

#### What has the feedback of the learners been?

The combination of having course steps in the form of case studies and explanatory videos, complemented by technical theory was most interesting for learners. From learner comments, we know that most of them wanted to have a better grounding in the principles and pitfalls of ultrasound in order to be better supported in their working lives. The course attracted professionals already working with ultrasound, which was our main target audience, as well as those with a general interest in the topic.

#### How did you approach the design of this course given the potentially vast audience?

The main challenge was that we had to design a course that would suit the needs of a vast audience with a great variety in backgrounds and prior knowledge of the subject. The advantage of the social learning aspect of the platform was that if learners wanted to go beyond the content covered in the course step, they were able to elaborate on the content through discussions with other learners, by sharing their knowledge from their experiences in the field. Whilst the course attracted a vast audience, owing to their differing levels of understanding, learners could go through the course at their own pace. We structured the course in weeks focusing on different areas: technology, medicine and the integration of technology and medicine in clinical cases. ■



The course, *Ultrasound Imaging: What is Inside?* will be running again on the FutureLearn website from Monday 23rd October - see <https://iii.hm/bdu>