

Online learning: an overview

The growing trend in online learning can open up new perspectives for Africa's health professionals. Jennifer Waller takes a closer look

A doctor in Malawi, a UK healthcare professional, a nurse in Malaysia, a specialist in South Africa, and a pharmacist from the USA – an unlikely combination for a conversation on health or clinical issues. But disparate groups like this one are connecting through virtual classrooms as online learning spreads across the globe.

What is online learning?

Defined simply, online learning is learning in which students make use of the internet.¹

Online learning can form part of traditional classroom activities – as an 'extra' to enhance teachers' or instructors' efforts. Or it can partially or completely replace 'face-to-face' teaching (see Figure 1). In this second instance, instructors and students may be in different places and may meet only occasionally or not at all. To interact, they open up their computers and access the online learning environment via an internet connection.

This type of online learning is a modern form of distance education, a tradition that started over 100 years ago with correspondence courses.¹ However, where distance learning conjures up a picture of the lone student studying in isolation, online learning can open doors to the wider world as students interact online with instructors and peers. The lone learner can become part of a community.

e-learning = electronic learning

Learning that makes use of electronic media, e.g. TV, e-mail, internet

online learning = e-learning via internet

e-learning where internet is the electronic medium

m-learning = mobile learning

Online learning that makes use of mobile devices²

A growing trend in higher education

Online learning is growing. In the USA, where the internet started, higher education institutions and corporate training centres were quick to see the potential of the new technology.¹ A 2011 survey found that 77% of colleges and universities in the USA now offer online classes.³

Elsewhere, according to Rovai,² more people have been enrolling in recent years in online higher education

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courses than in traditional higher education courses in several countries and regions – notably, North America, Western Europe, Australia, and New Zealand.

Online learning is advancing well beyond those countries. In Africa, contributors to the trend include the University of South Africa,⁴ the African Virtual University,⁵ and the International Council for Open and Distance Education's eLearning Africa initiative.⁶

Globalisation, higher education financial pressures, and the global spread of the internet itself – allowing education to reach people in remote areas – are among the factors fuelling the expansion of online learning in both industrialised and developing countries. Other factors include the ideological goal of empowering citizens by widening access to higher education and the political goal of meeting the increasing demand for higher education.²

Is online learning effective?

The US Department of Education analysed over 1000 studies on online learning¹ – mainly in the fields of medical training and higher education – using the conceptual framework shown in Figure 1.

Useful for gaining an insight into any online learning course, this framework identifies four main characteristics: the learner's experience (ranging from simply receiving instruction via a digital device to active or interactive involvement), whether the course is synchronous or asynchronous (in real time or with a time lag), and whether the online learning is a replacement for or an enhancement of face-to-face (teacher-student) instruction.

The analysis found that, on average, students studying online – particularly through 'blended' learning (where there is both online learning and face-to-face

Synchronous

At the same time

Instructor and students interact with each other in real time. They meet (online or offline) at a certain time – as in a traditional classroom. You have to be there at that time or you miss the class. This can be tricky across time zones.

Asynchronous

Not at the same time

Instructor and students interact with each other in their own time, often with a time lag. They don't meet at fixed times. It's like Facebook – someone posts a comment and later on you post your reply. This works well across time zones.

instruction) – performed slightly better than students in the traditional teacher-classroom situation.

Elements such as video or online quizzes did not appear to influence the effectiveness of online learning.

But the analysis found that the positive effect of online learning was larger where the online instruction was collaborative or instructor-driven than for studies where the online learners worked independently.¹

Online learning: University of Liverpool

Interactive, collaborative learning is at the core of the online postgraduate programmes offered by the University of Liverpool. More than 6500 students from around the world are currently enrolled in the University’s online master’s programmes in health (MPH and MSc in Clinical Research), psychology, management, IT, and law as well as doctoral programmes in business administration and higher education.⁷

All the University of Liverpool programmes, delivered in partnership with Laureate Online Education, are fully online and asynchronous. Students – many of them working professionals – engage with each other in weekly discussions, prompted by an instructor’s question. The discussion proceeds by means of written answers and comments (suitably argued and annotated) posted into the closed, online learning environment.

International community

‘One of the real advantages of studying online – particularly for public health – is that while you’re working in your field, you’re part of an international community learning new skills, new techniques, and new applications,’ said Sue Jones, Laureate Director of Online Studies for the University’s Master of Public Health (MPH) programme.⁸

‘You may have somebody working as a paediatrician in

(a) Learning Experience Dimension	(b) Synchronicity	(c) Face-to-Face Alternative	(d) Face-to-Face Enhancement
Expository	Synchronous	Live, one-way webcast of online lecture course with limited learner control (e.g., students proceed through materials in set sequence)	Viewing webcasts to supplement in-class learning activities
	Asynchronous	Maths courses taught through online video lectures that students can access on their own schedule	Online lectures on advanced topics made available as a resource for students in a conventional maths class
Active	Synchronous	Learning how to troubleshoot a new type of computer system by consulting experts through live chat	Chatting with experts as the culminating activity for a curriculum unit on network administration
	Asynchronous	Social studies course taught entirely through Web quests that explore issues in U S history	Web quest options offered as an enrichment activity for students completing their regular social studies assignments early
Interactive	Synchronous	Healthcare course taught entirely through an online, collaborative patient management simulation that multiple students interact with at the same time	Supplementing a lecture-based course though a session spent with a collaborative online simulation used by small groups of students
	Asynchronous	Professional development for science teachers through ‘threaded’ discussions and message boards on topics identified by participants	Supplemental, threaded discussions for pre-service teachers participating in a face-to-face course on science methods

Explanation: Online learning applications can be characterised in terms of (a) the kind of learning experience they provide, (b) whether computer-mediated instruction is primarily synchronous or asynchronous and (c) whether they are intended as an alternative or (d) a supplement to face-to-face instruction. Source: US Department of Education (2010).¹

Figure 1 Conceptual framework for online learning

a children's hospital in America, looking at lead poisoning in a particular big city, talking to somebody who is working on a feeding programme in the Sudan and to somebody who's working in a conflict situation in another part of the world,' said Sue.

University of Liverpool Director of Studies for the online MPH, Francine Watkins agrees: 'What we find is that the learning that happens in the classroom is extremely rich. We can give you the theories and the principles of public health but it is the sharing of that knowledge with your fellow students that really does make the difference,' she said.⁸

Participation in the global classroom discussions provides students with a number of advantages, said Francine and Sue. They include:

- development of critical thinking;
- exposure to different points of view;
- sharpening of communication skills;
- introduction to areas of public health that are new to the student;
- knowledge of different healthcare systems.
- sharing of best practice.

In addition by verbalising their learning, students start reflecting on what they have learned and begin to find ways of putting it into practice.

'You have to take that method or new reading, and apply it in your own setting straight away,' said Sue, an independent public health consultant as well as online MPH director.⁸

Challenging

It's not all good news. Some people find online learning – even with the interactive contact with peers – too challenging. Studies suggest that drop-out rates are generally higher in distance education.²

The University of Liverpool and Laureate have a team of student support managers in place to assist students and encourage them to carry on. Many of those who persist report that the journey is worth it.

What students say

Shereen Rahmat Minhas from Pakistan, living in Cairo, graduated from the University of Liverpool online MPH programme in December 2011 with a dissertation on women's perceptions and experiences of breast feeding that supplemented her work in maternal healthcare.

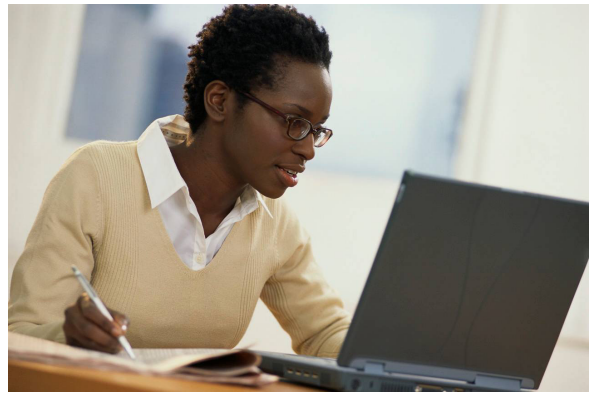
'I found the amount of work challenging but later I thought it was really useful. You have to read. You have to do research. You don't say a word without giving a reference,' she said.⁹

South African Avhatakali Edward Tshikhudo (pictured



left), is a senior registered mental health nurse in the independent healthcare sector in the UK and a current student on the online MPH programme. He made this comment:

'The virtual classrooms afforded me countless opportuni-



ties to interact, share with and draw on the wealth of knowledge from people from virtually all over the world and in all sorts of careers: nursing; medical; social services; allied medical professions, dental; environmental health; dietary care; etc.'

'My clinical and managerial knowledge and skills have improved significantly so much that even my line manager continues to ask me what exactly I am learning from my course which provides this great change in thinking,' he added.¹⁰

Lorne Patricia Gordon, from England, a retired senior lecturer in health promotion, originally from Tobago in the Caribbean, graduated in the University's online MPH programme in July 2011. Asked about the interactive element of the programme she said:

'I gained an insight into different people's beliefs. Health promotion is all about addressing people's beliefs. First of all you have to know what their beliefs and attitudes are if you need them to change. The change has to come from within. Dealing with different people from different parts of the world enables you to sort of stop, think, listen, hear, and act.'¹¹

Online learning – the future

Francine Watkins believes that online learning could be the future for public health education⁸ – promoting rich interactions between health professionals and facilitating access for people in remote locations.

For some health professionals living and working on the African continent, that future is starting now.

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Note: All students mentioned gave permission for use of their names, (photos) and comments.