EMPOWER expert pool: Student support

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Innovative impact

This paper looks at some of the potential innovations in distance education support and estimates the chances of them being mainstreamed in DE within five years.

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Innovations in Distance Education Student Support: What are the chances?

Virtual reality (VR)

One innovation likely to make a big impact in the next few years is virtual reality where you strap on headset and are drawn into an increasingly realistically feeling visual and auditory environment in which you can be involved in very convincing ways. You can see the possibilities for teaching in all sorts of environments - undertaking scientific experiment, engineering, architecture and so on. It might also be possible to use in social science and humanities teaching - why not allow students to be virtually involved in architectural digs?

But costs of VR are high; the sets currently cost US$400 or so, and they need powerful computers and very high speed broadband. VR environments are also very expensive for distance institutions to produce. Costs will come down a little but will they reduce enough? And one writer who has experienced a VR history activity worried about 'the nagging doubt that, used clumsily or simply for its own sake, VR could overwhelm students, distracting them from the need also to learn things that are not visual, and leaving them with the wrong kind of memories' (Matthews, 2017).

Chance of VR being widespread in distance education in five years - 20%

Artificial intelligence systems

These are IT systems where humans are replaced by highly sophisticated computer programmes. This is already happening to relatively routine occupations - getting information about - for example - getting your broadband fixed. Some commentators believe that AI is the biggest threat to employment since automation.

But can human tutors in distance education be replaced by artificially intelligent programs? An institute of technology in the US has just announced that it had developed such a program in a course on artificial intelligence ('Artificial Intelligence' 2016) The program is called 'Jill Watson' (as it used the IBM 'Watson' platform) and was developed over several years by looking at the questions posted on the course online discussion forums and

Resources
Book

Simpson, O (2013)*'Supporting students for success in online and distance education'*. Pub Routledge, New York (2013) ISBN 978-0-415-50910-7

Book chapter

Simpson, O. (2012) 'Technology supported assessment for retention' chapter in *'Captivation: Student Engagement and Development through Assessment'* Ed. Clouder, Brougham, Jewell, and Steventon iPED Coventry University, pub. Routledge ISBN 978-0-41561820-5

Website

'Supporting Students at a Distance' www.ormondsimpson.com

feeding 'Jill' the answers. She (it) was useless at first but it's now claimed she (it) can answer student' questions with a 97% certainty. It's claimed that students have only just learned that Jill is a program, but are happy with the discovery.

So are distance tutors at risk of replacement? A recent report on which jobs are most likely to be computerised in the next few years found that 'higher education teacher' was amongst the least likely to be automated (Frey et al, 2013) So I suspect that except for some fairly specific topics (such as AI) human beings will be needed in online education for many years to come.

Chance of AI being widespread in distance education in five years - 30%

Emotion detection systems

A recent online teaching development involves webcams. A student's webcam is used to focus on the student's face and sophisticated software is used to detect when the student was experiencing difficulties. Presumably the program could analyse expressions such as puzzlement, frustration, boredom - even anger. The program would then send an appropriate response. The UKOU is working on such a program, although a commercial version already exists – see www.emotuit.com.

Chance of emotional detection systems being widespread in distance education in five years - 10%

Learning analytics

This is defined by one UKOU researcher as 'the measurement, collection, analysis and reporting of data about learners … for purposes of understanding and optimising learning…' (Clow, 2016). It's not yet easy to find examples of the use of learning analytics in enhancing student retention, but one example is using statistical analysis of previous student results in order to predict current students' chances of success. That enables support to be focused on the most vulnerable students in any cohort (Simpson, 2006).

Chance of Learning Analytics being widespread in distance education in five years - 80%

MOOCs

Until recently MOOCS (Massive Online Open Courses) were thought to be the future of distance education both in terms of accessibility and success. There now appears to be some scepticism about this possibility based on two factors:

- Completion rates in MOCCS often appear to be 7% or less (Bothwell, 2016)

- More than 80% of the people taking MOOCS are already well qualified to at least first degree level.

Both these factors suggest that MOOCS are not widening successful access to distance education in any meaningful way, but are being used by already qualified people to undertake some modest upskilling or updating.

In addition it is proving challenging to 'monetise' MOOCS in a way that maintains their essential characteristics of accessibility and efficiency, whilst making an adequate return to the presenting institutions.

Chance of MOOCS being the dominant force in distance e education in five years - 10%

Online feedback and assessment development

Feedback and assessment area are key areas for retention in distance education and there are some hopeful developments such as interactive computer marked assessment where students are offered rapid feedback to multiple choice quizzes, and polling where students can be asked questions or indicate understanding online.

Chance of online and feedback and assessment becoming more essential components of successful distance education in five years - 90%

Communication and Social software

The biggest technical advances are likely to come from developments in communication and social software such as Facebook. But social software is also one of the most confusing areas for any distance educator - which to use? Email now appears to be 'old hat' for many students who are not only using Facebook, but text messaging, WhatsApp, Yik Yak, SnapChat, Twitter, Instagram and Yammer. Nevertheless this is where distance educators are most likely to be able to 'personalise' distance education, the most essential step in transforming the problem of distance education retention.

Chance of communication and social software becoming even more absolutely essential in distance education in five years - 100%

Something else

There may well be other developments coming along which I've missed. I still hope that there will be a breakthrough in what we know about motivating students to learn at a distance for instance. But as the Nobel -winning physicist Nils Bohr once said 'Prediction is very difficult, especially if it's about the future'.

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