

# Chapter 11

## Game Informed Virtual Patients Catalysts for Online Learning Communities and Professional Development of Medical Teachers

**Michael Begg**

*University of Edinburgh, UK*

**David Dewhurst**

*University of Edinburgh, UK*

**Michael Ross**

*University of Edinburgh, UK*

### ABSTRACT

*Modern medical education necessitates a complex interleaving of issues relating to practice, professional and personal development, teaching and learning. This complexity has led, in part, to medical education being persistently located in the vanguard of eLearning development. Here, the authors describe our approach to the development of virtual patient resources and in particular how this iterative dialogue arising from the allied processes of practice, reflection and pedagogy required to create new learning tools and resources has contributed to professional development of those engaged in teaching medical students and in building online learning communities at the University of Edinburgh.*

### INTRODUCTION

Communication and network technologies have played an increasingly visible role in global culture since the early 1990s when the Microsoft Windows operating system and the expansion of the Internet into what we now recognise as the World Wide Web brought affordable hardware and similarly cost effective innovations in data searching, content

creation and communication. The education sector has, over time, increasingly turned to information and communication technology (ICT), largely with a view to increasing capacity and reducing costs across administrative and business operations, as well as to increasing the quantity of educational resources available to teachers and students.

ICT continues to impact upon the processes of teaching and learning, and is now broadly regarded to be an integral component of the learning landscape

DOI: 10.4018/978-1-60566-780-5.ch011

(Laurillard, 1993) typified by the increasingly widespread use of Virtual Learning and Teaching Environments (VLEs), digital learning and library resources, e-assessment tools and software packages and Web 2.0 applications. The range of tools and applications available to teachers continues to grow, while eLearning literature commonly reports an increased degree of learner satisfaction, potential for rich engagement, a high degree of interactivity, and increased student adoption of self-directed learning habits. Equally compelling factors influencing the integration of digital technology into teaching and learning are contemporary cultural drivers towards mass Higher Education, widening access and lifelong learning. Numerous countries have declared ambitions to significantly increase the number of students entering into Higher Education and it is advances in ICT in general and eLearning in particular which make such ambitions possible (Littlejohn, 2003).

However, eLearning is still a relatively young area of development and can perhaps still be considered to be in a period of transition (Laurillard, 2007). It also has very broad application across different disciplines and different levels of education. In an attempt to narrow the focus, in this chapter, we have focussed on a particular community of practice—medical education—and how its various processes related to teaching, learning, reflection, professional development and activity recording are attempting to engage with the affordances the new digital technologies in the most meaningful and appropriate way.

Although the term “eLearning” is often used in very general terms about ICT in educational contexts, it is perhaps more appropriately used when considering the range of pedagogic and related activities associated with personal learning and professional development. We believe that successful eLearning offers user-centred, flexible opportunities for self-directed, reflective learning practices. It offers the potential for contextualised learning opportunities and acts as

an effective agent for developing learning communities through a broad range of direct user communication options such as email, Voice-Over Internet Protocol (e.g. Skype), discussion boards and online conferencing.

More recently, the eLearning landscape has seen the introduction of a plethora of so-called Web2.0 applications, typified by social networking sites such as MySpace, Facebook and Bebo, and benefitted from the associated opportunities for content creation, syndication and management, cross platform delivery and overall user control. Blogs, wikis, podcasts and vodcasts, social book-marking and content-tagging are all becoming increasingly commonplace within our educational institutions. Whatever threats these advancements may pose to the traditional organisational and political structures of our institutions they are unquestionably having a direct impact upon our learning communities. Learners, at every level, can now easily locate, author, share, discuss and aggregate information, establish collaborative networking relationships and project partnerships with peers and, effectively, steer their own personal and professional development.

## **eLEARNING**

eLearning is not merely a phenomenon that impacts upon learners. The implementation of eLearning tools and applications impacts upon all other stakeholders within the learning environment—particularly teachers (Ellaway, Begg, Dewhurst, & Macleod, 2005). It would seem clear that in developing the skills required to create new learning materials in unfamiliar media, and adopting new, equally unfamiliar approaches to creating learning content and educational activities presents considerable challenges for teaching staff.

Virtual Learning Environments (VLEs) are becoming ubiquitous in European and North American Higher Education institutions and an increasing number of these institutions have in-

17 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/game-informed-virtual-patients/36941](http://www.igi-global.com/chapter/game-informed-virtual-patients/36941)

## Related Content

---

### A Theoretically Informed Approach to Collaborative Writing in EAP Contexts Using Web-Based Technologies

Kris Pierre Johnston and Geoff Lawrence (2021). *Research Anthology on Developing Effective Online Learning Courses* (pp. 304-325).

[www.irma-international.org/chapter/a-theoretically-informed-approach-to-collaborative-writing-in-eap-contexts-using-web-based-technologies/271159](http://www.irma-international.org/chapter/a-theoretically-informed-approach-to-collaborative-writing-in-eap-contexts-using-web-based-technologies/271159)

### Supporting the Interconnection of Communities of Practice: The Example of TE-Cap 2

Élise Lavoué and Sébastien George (2012). *Evaluating the Impact of Technology on Learning, Teaching, and Designing Curriculum: Emerging Trends* (pp. 151-172).

[www.irma-international.org/chapter/supporting-interconnection-communities-practice/62902](http://www.irma-international.org/chapter/supporting-interconnection-communities-practice/62902)

### Online Participatory Learning for Low-Qualified Adult Learners

Gilberto Marzano and Luis Ochoa Siguencia (2019). *International Journal of Web-Based Learning and Teaching Technologies* (pp. 50-66).

[www.irma-international.org/article/online-participatory-learning-for-low-qualified-adult-learners/221883](http://www.irma-international.org/article/online-participatory-learning-for-low-qualified-adult-learners/221883)

### Undergraduate English Students' Use of Google Translate in Afghanistan: A Case Study

Sayeed Naqibullah Orfan (2023). *International Journal of Web-Based Learning and Teaching Technologies* (pp. 1-14).

[www.irma-international.org/article/undergraduate-english-students-use-of-google-translate-in-afghanistan/332398](http://www.irma-international.org/article/undergraduate-english-students-use-of-google-translate-in-afghanistan/332398)

### New Technology for the Classroom: Mobile Devices, Artificial Intelligence, Tutoring Systems, and Robotics

Liston William Bailey (2019). *Educational Technology and the New World of Persistent Learning* (pp. 1-11).

[www.irma-international.org/chapter/new-technology-for-the-classroom/220176](http://www.irma-international.org/chapter/new-technology-for-the-classroom/220176)