Social media in medical education: a new pedagogical paradigm?

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Social media is now a part of modern life.[1] Internet based tools allow millions to keep in touch with each other and anyone to create, and publish content instantly. Individuals enjoy the fun, and rely on the functionality of social media in their daily lives. But the real power of social media is the impact of bringing together clusters of like-minded people to engage in real-time, on-line dialogue on topics that merely interest them—or about which they feel passionately: 'community' is no longer a function of geography.

Crowd-sourced funding initiatives for start-up companies, and attempts to influence government or corporate policy through petitions 'signed' by thousands in a matter of days, are normal aspects of enterprise today. The Arab Spring is perhaps the most notable example of the potential impact of social media and shows how connecting thousands of people, in real time, can raise activism from a local concern to a worldwide movement.[2] Such developments are way beyond the expectations of the small group of academics who, in 1989, invented the internet to improve communication between scientists.[3] Their altruism, and insistence that the World Wide Web should be available 'free' to anyone on the planet, laid the foundation of today's developments.

Social media has yet to have the same impact on medical practice as they are having on daily life. However, the internet is making a difference. Knowledge, once the monopoly of the professions is now available 24/7 to anyone with a search engine. Healthcare professionals must get used to losing this monopoly or they won't be able to function in today's world. Inexorably, the tenor of consultations is changing: doctors—once suppliers of information are increasingly guides and interpreters, helping patients to make their decisions. And social media allows communities of people with similar conditions to come together and share experiences and information. So, the knowledge and experiences that patients bring to consultations may be of a completely different calibre to that found in text books and papers, something that doctors need to know how to respond to.

In tandem with the rest of society, the lives of doctors have been changed by social media. Professional and personal lives are not as distinct as they once were; the values, behaviours and relationships that underpin medical professionalism are the same. However, whereas professional behaviours were once mostly of concern during working hours, the actions and opinions of doctors can now be shared instantly with thousands on-line, 24 h a day. Maintaining trust can be a different challenge for doctors active in social media. Already, important guidance about professionalism and social media has been published to help doctors keep within professional boundaries when using social media for work and leisure.[4]

Education on the other hand, has already been more clearly changed by social media. Through organisations such as the Khan Academy, education is available online to many;[5] seminars have become webinars; traditional categories of teacher and learner are changing. 'Flipping the classroom' (see box 1) is now an accepted approach to learning in which learners play a much more active role and teachers are more supportive than didactic.[6 7] But traditionally, medical education has evolved slowly and, despite enormous changes in medical practice, William Osler would still recognise many styles of medical education in clinics and hospitals worldwide.

Box 1 Flipping the classroom

The concept of the 'flipped classroom' emerged throughout the 1990s. The intention is to use contact time with faculty for knowledge assimilation and exploration, with the process of knowledge transfer taking place elsewhere. Instead of the traditional didactic lecture being the mainstay of lesson time, it is replaced with coaching or discussion, with lectures and other materials often made available on-line. This model has been applied successfully in healthcare settings, as well as in mainstream high school and college education.[7]

Today's younger generations are 'growing up' using social media, and many can be considered 'digital natives'. Medical students and postgraduate trainees may have already experienced the power of on-line learning in addition to traditional forms of knowledge transfer.[8] The internet rather than the library is now the usual source of knowledge and the learning environment is changing. Now, the 'apprentice' does not have to rely on a discrete source of knowledge but can seek information from many 'masters' unbounded by geography or even qualification. The free and open access medical education movement has democratised medical education materials[9] and has empowered learners.

Steadily the social media movement is having an impact on learning. Conferences and conventions have #tags, @conference twitter accounts and some have more on-line distant participants than those at the convention centre. But more radical changes are happening. Existing projects leveraging social media in medical education include online journal clubs where authors defend their work during a global meeting of minds and 'tweet chats' that flatten the hierarchy and allow the wider multidisciplinary team (including patients) to contribute to learning about a subject area in a public forum.[10 11] None of this would be recognised by William Osler.

So, while much of medical education continues as it always has, a true 'disruption' is also happening. It is important that the impact of making potentially radical changes to how we teach and how we learn are properly assessed and evaluated. Some of these were discussed at the Social Media Summit at the 2014 International Conference on Residency Education.

The Summit, marking the importance and influence of social media on medical education, was an international open access meeting promoted using multiple media streams.[12] Through four major themes the conference explored some of the major questions about social media in medical education. For example, instant publication can lead to unformed ideas making it onto the world stage without having to break through the traditional cocoon of peer review, sense-checking and

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revision—so how can true scholarship flourish in this environment? Concerns about the genuine value of an innovation; how to navigate the plethora of blogs, websites and chats are addressed; how to reassure that social media education can be located within the traditional classification of pedagogy, and participants' hopes for the future of social media in medical education were all reflected in the work of the summit.[13–16] Recognising the importance of such questions and responding to them is crucial if we are to realise the possibilities of social-media based education.

We need to understand what works when, and be able to compare social-media based approaches to medical education with traditional methods. To do otherwise would perhaps be seen to be no better than continuing as we always have. But here is the difficulty. Social media platforms are not simply a tool to be applied in certain situations; they are now fundamental to how we relate to, and with, society. We simply cannot explore education innovations without recognising the impact of social media on our enterprise. Moreover, as social creatures, working in the socially situated science of medicine, we must resist simply codifying and classifying social media according to current ideas about how we practice medicine or medical education. It is likely that we are experiencing or are about to experience a significant 'disruption' to medical practice and medical education. Time is not on our side, and the nature of our discourse is already in the process of changing.

Clinical educators have always had the task of preparing today's students for tomorrow's practice, but never before have they had to balance such a range of approaches to learning and training. Confining or restricting the influence of social media on medical education so we can study its impact would be a hopeless task. So perhaps, rather than using a rigorous traditional framework of appraisal and scholarship, clinician educators should facilitate the transition of social media in healthcare into a valid, recognised element of professional practice, working with learners to ensure that we realise the potential to facilitate learning. And in doing so, the tricky task of today's clinical educators may be helped by coproduction and colearning with their generation of students: a real change from traditional pedagogy

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