

## ROLE OF SOCIAL MEDIA AND THE INTERNET IN EDUCATION

**Peter Vervaart**

Principal Scientist, Royal Hobart Hospital and Chair, C-IeL IFCC

### ***Corresponding Author:***

Dr Peter Vervaart

Principal Scientist

Royal Hobart Hospital and Chair, C-IeL IFCC

e-mail: peter.vervaart@dhhs.tas.gov.au

### **ABSTRACT**

Since the advent of the Internet, and in particular the development of the interactive version of the web, Web 2.0, use of Social Media has developed into a major strategy for businesses and organizations such as the IFCC to use for the purposes of Public Relations and Education. The early Internet 'Web 1.0' was a largely static environment which did not allow interaction between organizations and their customers and/or members and as such was mainly used as an information repository rather than a dynamic environment for the exchange of ideas and active marketing and education. Since the development of Web 2.0 we have seen a massive increase in web based traffic which could be loosely called 'social networking' which initially was mainly networking between individuals but more recently has developed into a major marketing resource allowing networking between organizations and individuals on the web. It follows then that by developing a Social Media presence on platforms such as Facebook, LinkedIn, Twitter and other social media sites organizations can use this networking for the purposes of marketing, public relations, and in the case of IFCC, education of members and other interested individuals across the globe.

### **WHAT IS SOCIAL MEDIA?**

The Wikipedia definition of 'social media' is "web-based and mobile based technologies which are used to turn communication into interactive dialogue among organizations, communities, and individuals"(1). As such it includes social media platforms such as Facebook, LinkedIn, Twitter, etc all of which have the general property of being "Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user-generated content" (2). To understand what is meant by that statement one needs to have some understanding of the development of the Internet.

### **WEB 1.0**

The first iteration of the Internet has become known as Web 1.0. Web 1.0 is largely a 'static' platform in that users visit websites and look at information but do not interact with the website. Web 1.0 websites are therefore used mainly as information repositories containing information which is useful to the viewer but with which the viewer does not interact in any way. There is not a problem with this and in fact there are still many examples of Web 1.0 websites such as the Lab Tests Online portal: [www.labtestsonline.org](http://www.labtestsonline.org) which primarily exist as sources of information and for which there is no need for interaction with the user of the information (3) and, in fact, where interaction with the user may be counterproductive and lead to the presence of incorrect and/or biased information. This is actually one of the criticisms of Wikipedia, which although a repository of information, is also prone to incorrect information and bias due to the capacity of users to interact with and change information on the site.

## WEB 2.0

Web 2.0 by comparison is a loosely defined intersection of web application features that facilitate participatory information sharing, interoperability, user-centered design and collaboration (4). It is therefore a dynamic two way environment whereby users can interact with the website. It therefore also allows for the exchange of ideas and more recently has also allowed active marketing and education activities to occur. An example of a Web 2.0 repository is the Medpedia portal: [www.medpedia.com](http://www.medpedia.com) which is a medicine based portal, similar to Wikipedia, which allows medical professionals and patients to connect for the exchange and development of medicine based questions and answers but importantly from a moderated perspective to ensure that the information discussed and exchanged is correct (obviously important from a medical perspective) and not biased (also important from a commercial perspective e.g. influence of the pharmaceutical industry).

## FEATURES OF WEB 2.0

The major features of Web 2.0 therefore are the ability to allow two-way interaction between the website and the users of the website which from a person to person perspective allows for social networking. Another feature is that Web 2.0 allows for decentralized content production as the contents of a Web 2.0 site are not developed by a website developer but are actively developed, changed and updated by the users of the site with only the framework for the site developed centrally.

Web 2.0 also allows for syndication, the process by which users of the website can 'follow' the website by a process known as Really Simple Syndication (RSS) feeds whereby when a change to a website is made that change is automatically notified to followers so that by clicking on the RSS feed they can view the new content. The new IFCC website for example includes two RSS feeds (indicated by the orange button above the titles) for IFCC News and IFCC Events such that when a new event or news item is added to the website followers of the IFCC RSS feeds are automatically notified and can view the new content.

Blogs are becoming increasingly important as a mechanism for journalists, etc to get their messages out especially as the 'traditional' news media loses impact and market share. Obviously though blogs by definition are opinion pieces, generally without any form of editorial control, and thus readers of blogs need to be careful to understand that the information may be of dubious origin or missing fact.

From an educational perspective a large number of educational and professional websites use Pod (audio) and Vod (Video/Audio) casts as an alternative to face to face lectures, presentations etc. Along similar lines educational and professional websites are also increasingly using Wikis to generate and update educational material for presentation to students, members, followers etc and thus they are also becoming important educational tools.

## POPULAR WEB 2.0 SITES

Of course the altruistic use of Web 2.0 has not become its major use and in fact it is in the true concept of 'social' activity where it has really taken off with websites such as Facebook; which is used primarily for social networking but which more recently has been used increasingly for commercial purposes through users 'liking' particular companies and/or products or participating in Facebook based marketing campaigns. The IFCC has a Facebook page which currently has 19 members and over 300 'likes'.

In a similar vein, but setup primarily for business social networking is LinkedIn. Again, IFCC has a LinkedIn presence with a current membership of 270 indicating that more members are interested in interacting with their IFCC colleagues through what they see as a professional rather than social networking site. Experience with such site though is that unless they are moderated they quickly become overtaken by facetious posts and commercial interests pushing particular products or services. A number of profession based LinkedIn sites have become so overtaken by commercial and recruiting messages that they become basically unusable and this is always a risk with social networking sites and the messages they try to carry.

Other Web 2.0 sites of interest include Wikipedia, an online encyclopedia discussed above; YouTube, a video sharing portal which increasingly is being used for educational purposes but is also being used by others as a money making tool as hits are paid for by advertisers which generally means the more bizarre the video the more money can be made!

Twitter, a microblogging site which allows only 140 characters per message is an interesting use of social media as users 'stream' their actions and thoughts to subscribers. Increasingly Twitter is being used as a marketing tool as originators, generally celebrities, are paid to tweet about particular products and services for money.

A recent addition to the web 2.0 stable is the site Pinterest, which is basically an online pinboard which allows members to "pin" images, videos and other objects to their pinboard and also allows 'followers' to follow the pinboards as they change and are updated. Again, this site is being used for commercial purposes as products and services are advertised either directly or by initiators being paid for including commercial content.

## **HARNESSING WEB 2.0 FOR HEALTH APPLICATIONS**

Web 2.0 tools are increasingly being used to connect and network globally with experts and have replaced what formerly used to be known as 'bulletin boards' and, more importantly, allow real time communication which has led to increasing use of telemedicine. However, many medical and pathology sites also now use web 2.0 tools for social engagement, education and collaboration.

In pathology the intersection between Web 2.0 and Pathology has led to the use of the term Pathology 2.0. In general terms Pathology 2.0, first termed by Mayo Clinic anatomical pathologist Keith Kaplan, describes the ability to share and interact with pathology images and content (5). As we move into the realm of mobile pathology, with virtual & 'immersive' multimedia based reporting and decision support requesting as well as increased use of interactive digital medical records we may actually be moving into the realm of 'Pathology 3.0'.

A number of resources exist for developing a social media presence and amongst the most useful, from a health perspective, are the Centres for Disease Control and Prevention (CDC) The Health Communicator's Social Media Toolkit (6) and the AMA Policy: Professionalism in the Use of Social Media (7). The new IFCC Committee on Internet and eLearning (C-IeL), of which I am the current Chair, is also currently developing a policy on IFCC Internet and Social Media activities.

## **USE OF WEB 2.0 AND HEALTHCARE**

There is not a lot of data on the use of social media within Healthcare however a recent blog on the excellent Healthworks Collective website ([healthworkscollective.com](http://healthworkscollective.com)) by Gary Levin (Dr Youtwitface!) described some recent statistics on the use of social media in healthcare (and the risks). Some other statistics from the Healthworks Collective give an indication of the rapid expansion in this area and why we as providers of information need to be engaged with the process as 81% of Physicians are expected to own a Smartphone by the end of 2012 and 79% of physicians watch video online, most commonly for CME purposes (8). As expected Facebook remains the most popular social media platform for doctors however LinkedIn is quickly becoming the platform of choice due to the risk issues described in Gary Levin's blog.

## **SOCIAL MEDIA, THE INTERNET AND EDUCATION**

Social media networking is not just for marketing and product placement it can also champion a cause, raise awareness of health issues and help educate patients and health care consumers with accurate and trustworthy information. As described above it also allows health care professionals and organizations to connect and engage with the community and their colleagues to further their education.

As you are all aware, CME is an ongoing requirement of our 'profession' and one of the roles of professional associations, such as the IFCC, is to promote and design education and training activities for their members. Traditionally this has involved meetings, seminars, conferences etc the main feature of which is that it is education which is generally offered in the larger cities and in a face to face format and thus is of not much use to our rural, regional and developing world colleagues due to cost and access. One of the advantages of the internet in education is that it has allowed us to provide education in an 'interesting' format, where and when members want or need it and because of this we have seen online education increase from 9% of CME in 2008 to a predicted 50% of CME used by 2016 (9), although that figure is expected to be much higher primarily due to the exponential expansion in the use of e.g. smart phones described in the statistics from the Gary Levin blog.

## **ADVANTAGES OF SOCIAL MEDIA IN EDUCATION**

Traditional lecture formats are lectures which involve transmission of content based on vocabulary and images with, generally, the objective being the passing of "standardized" tests thus assuring a minimum critical level of information (i.e. that required to 'pass' the test) before progression. Thus traditional lecture formats are very similar to Web 1.0 in that it is one-way and obviates the need for emphasis and clarification as there are generally time constraints on delivery and/or there is no formal feedback mechanism.

Web 2.0 as described above is two way process and thus a social network can facilitate learning by allowing for prolonged interaction between the provider of the education and the recipient of the education which has the effect of reinforcing the information provided before the recipient progresses. For example a blog can be useful to communicate general aspects on a subject, to deliver supplemental content, and to share interesting or currently relevant material. A blog can also be used to address specific questions posed by subscribers in a more expansive manner. Thus, social networking can encourage "consultation patterns" within a social network so as to reinforce and cement ideas within the learning group subscribed whether that is students or members of a vocational or professional group.

## WHAT IS THE IFCC DOING?

The IFCC has a new website ([www.ifcc.org](http://www.ifcc.org)) which will allow for improved interaction compared to the old site and we have also seen the formation of the Committee on Distance Learning (C-DL) within the Education and Management Division (Chaired by Janet Smith) and the C-leL to facilitate development of educational content. In basic terms, it will be the role of the C-DL to develop and source educational material and the role of the C-leL will be to publish this material in an accessible format for IFCC member nations (as well as look after the content management system for the new website). We therefore welcome feedback from members of the IFCC on these new initiatives so that we can provide educational material in an accessible and usable format for our members.

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