Social media in anaesthesia education: Striking the right balance

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The term social media describes a digital technology that facilitates the exchange of ideas, information and thoughts through virtual networks and communities. The concept stems from the term community of practice (CoP), which is based on three key elements: a) a shared area of interest, b) people who interact and c) their need to practice.[1] Internet with its 2.0 version has provided a virtual platform in the form of web applications and social media networking sites for CoP, which allow end-users to engage in interaction and collaboration on a real-time basis actively,[2] rather than having one-way interactions.

There is no denial that social media is ubiquitous, and this platform has found its way into the medical education pedagogy. As per a survey, more than 90% of students pursuing medicine, and almost 80% of resident doctors use online social media networks to seek information.[3]

The social media platforms were not primarily educational and catered more to the entertainment aspect. However, majority of them have delved into being teaching and learning platforms. They promote learning through case discussions and opinions and foster group collaboration through various professional associations and peer communication without time constraints and geographical location.[4] Journals use social media websites to increase visibility and wider dissemination of information.

Social media channels include those with instant messaging services like Facebook, Twitter, WhatsApp and others like wikis, blogs, podcasts and YouTube.[5,6]

- *Facebook*: With almost 2 billion monthly users, it is one of the most widely used platforms among anaesthesiologists, with dedicated groups like The Anaesthetist, Global Anaesthesia Society, Anaesthesia fundamentals and Anaesthesia PG Hustle, to name a few. These groups discuss topics related to anaesthesia, pain and intensive care by sharing experiences and insights.
- *Twitter* (recently renamed X): It is another highly active social media site that has individual or group accounts. Tweets use 'hashtags' to group topics of interest. The regional anaesthesiology community is actively involved in twitter activity, generating a large number of tweets pertaining to education on opioid-sparing analgesia, peripheral nerve blocks and multimodal pain management strategies. An article reported the successful use of a Twitter-augmented journal club to engage the anaesthesia community and residents.[7] To increase visibility, journals use X to share the latest publications with infographics and one-pagers. Societies and professional bodies use this platform for intimations for upcoming conferences and retweets for promoting certain resources.

- *WhatsApp*: It is one of our country's most popular instant messaging apps and has been explored as an educational tool for e-learning by various medical specialities. As a secure educational tool, it employs a two-way opt-in for the users, enables monitoring of users' activity and message reading, and utilises end-to-end encryption. However, its use as an educational tool has produced inconsistent results. One of the studies observed poorer clinical reasoning among anaesthesia residents compared to traditional e-learning, owing to the dispersion of attention with smartphone use.[8] Contrary to this, Bakshi *et al*.[9] demonstrated improved students' knowledge of acute pain management using a WhatsApp-based teaching module.

- *Blogs*: Blogs are regularly updated websites which entail a series of articles by an individual or a group targeting a specific audience. The Anesthesia Blog (http://www.theanesthesiablog.com) covers a vast range of current topics pertaining to the field, like quality of recovery after surgery and risk prediction models after surgery.[10]

- *Wikis*: Wikis are websites where multiple users can contribute by editing information in a shared document. The first wiki in anaesthesia, Open Anesthesia (http://www.openanesthesia.org), was introduced in 2009. It showcased recent articles from anaesthesia and analgesia, enhancing and supplementing the content of the journal. Today, anaesthesia departments across various institutions utilise wikis to coordinate clinical services and furnish the residents with clinical and electronic medical record details.[9]

- *LinkedIn*/SlideShare: LinkedIn has emerged as a professional network where academic information and ideas can be shared. SlideShare has emerged as a web platform with diverse anaesthesiology resources which are available as slideshows.

- *Podcasting*: Podcasts are episodic or serial digital media files that can be downloaded conveniently through web syndication. They form useful means for updating knowledge and getting clarity on ambiguous areas.[11] Recently, the Indian Journal of Anaesthesia has launched its podcast, highlighting interesting research featured in the journal.

- YouTube, as a social media platform, helps in both acquiring knowledge through lecture videos and honing skills through video demonstrations on a wide range of topics. Moreover, YouTube's interactive features, such as comments sections and community engagement, allow users to interact with content creators and fellow learners, fostering a collaborative learning environment.

These social media platforms offer several advantages over in-person and print educational tools:

a. Active learning resources: These social media sites have now become the first point of access for information through enormous e-learning resources because of their easy accessibility and active learning through discussion.

b. Global outreach: There is an access to a bulk of education resources in the form of videos, podcasts, webinars, etc., without any global boundaries. The information can be shared with global audience, who can enhance and update their knowledge.

c. Collaboration and networking: It helps to facilitate collaborations by connecting with peers, mentors and experts in the field, fostering discussions and sharing best practices.

d. Impact on journals: It has improved the scientific standing of journals. This has been witnessed as a significant escalation in the impact factor of Indian Journal of Anaesthesia after its active appearance on platforms like Twitter and Facebook.

e. Conference intimation, visibility of scientific meetings and publicisation.

However, a key concern remains that the advancement of learning in medical education through social media may primarily be influenced by social behaviour and the widespread availability of affordable technology like smartphones rather than empirical educational research or theory-driven instructional design.[12] Various concerns regarding the ambiguity of information and plagiarised content still hold true. Unlike any published literature, which goes through a stringent check, the information shared through social media often remains unvetted. These were primarily not meant to be an educational tool. With the availability of other content, the reader is prone to innumerable distractions. There could be compromises in patient confidentiality and privacy. Inability to retract or delete uploaded content is also a serious concern. Above all, these social media

platforms are meant to be addictive and often use likes and notifications to engage the reader. Therefore, the actual productive time spent on learning is grossly compromised.

Despite these concerns, we are fast moving into an era where majority of our students are Millennials or Gen Z, who have adopted the language of computers in their infancy. To teach and engage this computer-savvy generation, we need to adapt to the new virtual technology forums driven by social media. However, looking at all the concerns, we need to introspect if there is enough evidence to say that the learning promoted by social media has actually brought about improvements in educational outcomes. Moreover, if such evidence is present, does it possess a solid foundation in the principles of education theory?

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