

# Effectiveness of social media as a medical teaching tool

Rajendran R<sup>1</sup>, Joena V<sup>2</sup>

<sup>1</sup>Dr. Ramesh Rajendran, Associate Professor, <sup>2</sup>Dr. Virgin Joena M, Assistant Professor, Department of General Medicine, Velammal Medical College Hospital & Research Institute, Madurai, India.

**Address for Correspondence:** Dr. Ramesh Rajendran, Associate Professor, Department of General Medicine, Velammal Medical College Hospital & Research Institute, Madurai. e-mail address: drramesh0483@gmail.com

## Abstract

**Introduction:** Social media has become a pervasive force in the lives of 21<sup>st</sup> century learners. Mobile learning has been increasingly used in the educational context. However, its adoption in medical education has been slow, and its effectiveness in medical education is a new area of inquiry. This study was conceived to assess the effectiveness of social media as a medical teaching tool. **Materials and Methods:** The study was conducted as a cross sectional, observational study with 150 III year MBBS students as study participants who were already enrolled in social network groups for educational purpose. A questionnaire catering to the objectives of the study was distributed and the response was evaluated. **Results:** 54% of the students answered that social media as a teaching tool, significantly made learning fun and lively. 55% of students responded that it significantly improved the academic enthusiasm. 66% of students observed that it was significantly effective in kindling interest in clinical learning. 61% felt that it simplified the difficult concepts moderately and 28% felt that it significantly simplified difficult concepts. 60% of students felt that it did not distract them from their routine studies. 42% and 54% of students rated the usefulness of the social media as an educational tool as excellent and as moderate respectively. **Conclusion:** Social media is effective as a medical teaching tool improving enthusiasm in academics, kindling interest in clinical learning, making learning fun and lively, without much distraction to students and can be integrated in the medical educational context.

**Keywords:** Social media, Teaching tool, Academics, Interest, Distraction, Effectiveness

## Introduction

Social networking among adolescents is not just a fad; it is part of their culture. Social media is the in-thing these days [1]. Currently, social networks are used for a variety of purposes, such as chatting, socializing, posting, and most interestingly, learning [2,3]. Social media has become a pervasive force in the lives of 21<sup>st</sup> century learners [4]. Mobile learning has been increasingly used in the educational context [5]. Social media as a teaching tool has a natural collaborative element [1].

Social and communicative connections has been elevated to the level of an epistemic category central to learning processes because they promote connectivist learning by sharing of information, active participation and social interaction [6,7]. Students appreciate the

contribution of social media network to their own personal learning experience [8]. Students also look out for more innovative ways of teaching [4]. Students wish their educators make more use of social media [9].

However, the higher educational community has been noticeably slow in adopting social networking technologies into the curriculum [10]. The use of social media holds great value as a teaching and learning tool in medical education, by including students in the creation of their own knowledge and by facilitating engagement, self-reflection and active learning [11]. Studies have shown the merits of social media use in educational settings; however, its adoption in health science education has been sluggish, and the contributing reasons remain unclear [12]. Its effectiveness in medical education is a new area of enquiry [13]. There is controversy about whether to use

Manuscript received: 18<sup>th</sup> March 2017  
Reviewed: 27<sup>th</sup> March 2017  
Author Corrected: 3<sup>rd</sup> April 2017  
Accepted for Publication: 10<sup>th</sup> April 2017

social networking in medical education [14]. Therefore this study was conceived to assess the effectiveness of social media as a medical teaching tool.

**Objective of the study:** To assess the effectiveness of social media as a medical teaching tool

## Materials and Methods

**Study Design:** Cross sectional, observational study

**Study setting:** Velammal Medical College

**Inclusion criteria:** Undergraduate medical students enrolled in social media network used for educational purpose

**Exclusion criteria:** Undergraduate medical students not enrolled in social media network used for educational purpose

**Study participants:** III year students of a medical college enrolled in social media network for educational purpose.

**Study size:** 130 students

**Variables:** Age group of students:19-20; 52 boys and 72 girls.

**Data source:** Self administered questionnaire paper with Likert scale grading

**Bias:** Possible selection bias. Students inherently more motivated to study and those who are comfortable with social media and those who prefer to learn in a group may be the ones who enrolled into social media and it is likely that they would give positive ratings to its usefulness.

The Department of General Medicine, Velammal Medical College, with the permission of administration,

## Results

A total of 130 students participated in the study. It included 52 boys and 78 girls.

70/130 (54%) students answered that the social media used as a teaching tool significantly made learning fun and lively. 48/130 (37%) students considered it to make learning fun and lively moderately. 12/130 (9%) students answered that it could not make learning fun and lively. 72/130 (55%) students responded that social media education significantly improved the enthusiasm in academics, whereas 50/130 (39%) students responded that it moderately improved the academic enthusiasm. 8/130 (6%) students responded that it did not improve the enthusiasm in academics.

86/130 (66%) students observed that the social media was significantly effective in kindling interest in clinical learning and 35/130 (27%) students observed that the social media was moderately effective in kindling interest in clinical learning and 9/130 (7%) observed that it did not kindle interest in clinical learning. 36/130 (28%) students felt that the social media as a medical teaching tool was significantly effective in simplifying difficult concepts, whereas 79/130 (61%) students felt that it was moderately effective in simplifying the difficult concepts. 15/130 (11%) students perceived that it could not simplify difficult concepts.

is using social media like facebook, whatsapp as a platform for sharing and discussing interesting clinical materials, with General Medicine faculties and medical students forming a closed group network. The facebook group is mainly used to post interesting case puzzles, clinical pictures, radiological images, ECGs, unusual laboratory values, quizzes followed by a short relevant discussion with critiques and comments from faculties and students on the particular subject. Whatsapp group is mainly used for intimating interesting clinical cases in the wards and their findings with the purpose that students could examine those cases in their leisure time and be appreciative of the wide spectrum of the diseases. The social media network groups have been functioning for more than 1 year regularly.

In order to assess the effectiveness of social media in the learning environment of the students, a preformed printed feedback questionnaire catering to the objectives of the study was distributed to 130 students who were enrolled in the social media group. The students belonged to the III year MBBS. They were in the age group of 19-20. There were 52 boys and 78 girls. The participation in this study was anonymous to the identity of the students. Participation was voluntary.

The parameters tested were the effectiveness in making difficult concepts simple, making learning fun & lively, in improving enthusiasm in academics, in kindling interest in clinical learning. Also questions were asked as whether it caused distraction from their routine studies, about its overall usefulness and also about the constancy of usage. Institutional ethical committee clearance was obtained. The feedback forms were collected and the data were electronically recorded and their response to various parameters was analyzed.

78/130 (60%) students felt when social media is used as a medical teaching tool, it did not distract them from their routine studies. 40/130 (31%) students felt it distracted them from their routine studies moderately and 12/130 (9%) students felt it significantly distracted them from their routine studies.

55/130 (42%) students rated the usefulness of the social media as an educational tool, as excellent and 73/130 (56%) students rated the usefulness as moderate and 2/130 (2%) students rated it as not useful.

56/130 (43%) students answered that they would be using the social media for educational purposes regularly and 69/130 (53%) students answered they would use it discontinuously and 5/130 (4%) answered they would not be using it.

**Table-1: Response to different questions.**

Parameter assessed	Number of responders (percentage in parentheses)		
	Significantly	Moderately	No
Whether it makes learning fun and lively?	70 (54%)	48 (37%)	12 (9%)
Whether it improves your enthusiasm in academics?	72 (55%)	50 (39%)	8 (6%)
Whether it kindles interest in clinical learning?	86 (66%)	35 (27%)	9 (7%)
Whether it makes difficult concepts simple?	36 (28%)	79 (61%)	15 (11%)
Whether it distracts your routine studies?	78 (60%)	40 (31%)	12 (9%)
Question	Excellent	Moderate	Not useful
How will you rate its usefulness?	55 (42%)	73 (56%)	2 (2%)
Question	Regularly	Discontinuously	Not be using
How often will you be using it?	56 (43%)	69 (53%)	5 (4%)

## Discussion

Social media these days is being used by youth for making their individuality felt on the virtual world. However, it can also be used for creating social awareness and connecting students and youth to more professional and knowledgeable world [1].

Medical education has grown beyond the boundaries of the classroom, and social media is seen as the bridge between informal and formal learning as it keeps students highly engaged with educational content outside the classroom [14]. It also allows them to communicate with their tutors without any restriction and thereby strengthening student-tutor relationship [18,19]. This type of learning is characterized not only by greater autonomy for the learner but also by changing roles for the teacher; indeed, a collapse of the distinction between teacher and student altogether is perceived, indicative of connectivist learning [6].

Based on the results of the study, the following conclusions can be drawn. When used as a medical teaching tool it significantly made learning fun and lively for a majority of the students. Social media education can be used to generate enthusiasm in academics among medical students as evidenced by

majority of students strongly agreeing that it improved the enthusiasm significantly. Education through social media is also effective in kindling interest in learning clinical aspects of a case as majority felt it significantly helped them in kindling interest in clinical learning.

Further, social media learning is warmly accepted by majority of the medical students as majority of them responded that they will be continuing to use it in future. Discontinuous use of social media by few students was probably because of their busy schedule. Apprehension regarding distraction arising out of social media use as a medical teaching tool is probably overestimated as majority of students did not feel that they were distracted.

The efficacy of social media in simplifying difficult concepts was only moderate and this is understandable because social media cannot be the best platform for explaining difficult concepts as it has intrinsic barriers for effective communication. The rating of the overall usefulness of social media as moderate according to majority, could be attributed to the multitude of other educational modalities also playing their part in simplifying medical learning. The results of our study is

similar to the results published in various studies. In a study by El Bialy, Jalali A, conducted at the medical University of Ottawa, it was observed that most educators did not use social media in their education. They expressed concerns such as privacy issues, time-wasting, distraction, and that these media might not be suitable for education. Some educators were unaware of social media use in education. The educators those who used social media, used it to post articles, explanatory comments, and videos, post lecture comments, book recommendations, revision files, quizzes, and course related humor. Those who refused to use social media in education, expressed concerns such as privacy issues, time-wasting, distraction, and that these media might not be suitable for education [14].

In that study by El Bialy, Jalali A., majority of students considered social media to be time effective, inviting, and an improvement in the learning experience similar to our study. Students preferred quizzes, revision files and explanatory comments [14]. In a study by Alsuraihi AK et al., conducted among medical universities in Saudi Arabia, 95.8% of the students believed that it is beneficial, while 40% thought using social media might be distracting [15].

A pilot study by George et al., conducted at the Penn State College of Medicine evaluated the integration of Twitter, YouTube, Flickr, Blogging, and Skype in two elective courses for fourth year medical students. The results of this study showed that students were satisfied by the new approach in both courses. They also expressed the extent to which the integration of social media in teaching enhanced their learning similar to our study. However, some students reported challenges such as lack of time and technological facilities. This may be a cause for a high proportion of discontinuous use of social media rather than its regular use as an educational tool which was also reflected in our study [17]. In a study by Avci K et al., conducted at the Afyon Kocatepe University, Faculty of Medicine, Afyonkarahisar, Turkey that evaluated twitter as a teaching tool, it was found that students believed it to be efficient and effective to their learning as was found in our study. It also strengthened student-tutor relationship [18].

Social media has been incorporated in several medical colleges and it has also been recommended that social media be integrated in the medical educational curricula [11,16]. 132 of all U.S. medical schools have a website

and 95% of them have some facebook presence. Out of these schools, 26% have official medical school SM pages and 71% have student groups [20]. Ozkan and McKenzie in their paper, Social Networking Tools for Teacher Education, in *Proceedings of Society for Information Technology & Teacher Education International Conference*, 2008 contend that educators need to engage students with a more 21st century approach to teaching and social networking technologies can provide such a venue [21].

This study also concludes the same as it is effective in improving enthusiasm in academics, kindling interest in clinical learning, making learning fun and lively, without much distraction to students. Despite all the criticism, social media have the potential to build interactivity, engagement, and collaboration. It will remain the responsibility as educators to focus on the student, use them at their fullest, and integrate them into existing curricula to best benefit the students [14].

Medical schools need to improve the utilization of social media by their faculty and students by developing activities and encouraging their usage in education. Medical institutions should also guide students on how to get the maximum benefit from social media and how to avoid its drawbacks, such as distractibility [15].

## Conclusion

Social media is effective as a medical teaching tool as it improves enthusiasm in academics and kindles interest in clinical learning, making learning fun and lively, without much distraction to students and can be integrated in the medical educational context.

**Funding: Nil, Conflict of interest: None**

**Permission of IRB: Yes**

## References

1. Gitanjali Kalia. A Research Paper on Social media: An Innovative Educational Tool. Issues and Ideas in Education 2013 March; Vol.1 pp 43-50
2. Yunus M, Salehi H, Nordin N. ESL pre-service teachers' perceptions on the use of paragraph punch in teaching writing. ELT 2012 Aug 22;5(10):1453-1467. doi:10.5539/elt.v5n10p138
3. Mazman S, Usluel Y. Modeling educational usage of Facebook. Computers & Education 2010 Sep; 55 (2): 444-453.doi: 10.1016/j.compedu.2010. 02.008

4. Quincy Conley, Kent E. Sabo. The social media instructional design model: a new tool for designing instruction using social media. *Int. J. of Social Media and Interactive Learning Environments* 2015; Vol.3, No.4 doi: 10.1504/ijsmile.2015.074008
5. Harun Bin Sinen. A literature review on mobile learning. *Int. J. of Social Media and Interactive Learning Environments* 2015; Vol.3, No.3 doi: 10.1504/IJSMILE.2015.072266.
6. Couros A. Open, connected, social – implications for educational design. *Campus-Wide Info Systems* 2009 Jun 19;26(3):232-239
7. Huang HM. Toward constructivism for adult learners in online learning environments. *Br J Educ Technol*. 2002 Jan; Vol.33, No.1
8. Gila Kurtz. Facebook group as a space for interactive and collaborative learning. *Int. J. of Social Media and Interactive Learning Environments* 2013; Vol.1, No.4
9. Ronald J.J. Voorn, Piet A.M. Kommers. Social media and higher education: introversion and collaborative learning from the student's perspective. *Int. J. of Social Media and Interactive Learning Environments* 2013; Vol.1, No.1 doi: 10.1504/ijsmile.2013.051650.
10. Kevin P. Brady, Lori B. Holcomb, Bethany V. Smith. The Use of Alternative Social Networking Sites in Higher Educational Settings: A Case Study of the E-Learning Benefits of Ning in Education. *Journal of Interactive Online Learning*. Summer 2010; Vol. 9, No.2
11. Davis WM, Ho K, Last J. Advancing social media in medical education. *CMAJ*. 2015 May 19;187(8):549-50. doi: 10.1503/cmaj.141417. Epub 2015 Apr 7.
12. O'Sullivan E, Cutts E, Kavikondala S, Salcedo A, D'Souza K, Hernandez-Torre M, Anderson C, Tiwari A, Ho K, Last J. Social Media in Health Science Education: An International Survey. *JMIR Med Education*. 2017;3(1):e1 doi: 10.2196/mededu.6304 PMID: 28052842 PMCID: 5244031
13. Cheston CC, Flickinger TE, Chisolm MS. Social media use in medical education: a systematic review. *Acad Med*. 2013 Jun; 88(6):893-901. doi: 10.1097/ACM.0b013e31828ffc23.
14. El Bialy S, Jalali A. Go Where the Students Are: A Comparison of the Use of Social Networking Sites Between Medical Students and Medical Educators. *JMIR Med Educ*. 2015 Sep 8;1(2):e7.
15. Alsuraihi AK, Almaqati AS, Abughanim SA, Jastaniah NA. Use of social media in education among medical students in Saudi Arabia. *Korean J Med Educ*. 2016 Dec;28(4):343-354. Epub 2016 Dec 1.
16. Jalali A, Wood TJ. Teaching medical students social media: must or bust. *Med Educ*. 2014 Nov;48(11):1128-9. doi: 10.1111/medu.12585.
17. George DR, Dellasega C. Social media in medical education: two innovative pilot studies. *Med Educ*. 2011 Nov;45(11):1158-9. doi: 10.1111/j.1365-2923.2011.04124.x. Epub 2011 Sep 21.
18. Avcı K, Çelikden S, Eren S, Aydenizöz D. Assessment of medical students' attitudes on social media use in medicine: a cross-sectional study. *BMC Med Educ*. 2015 Feb 15;15:18. doi: 10.1186/s12909-015-0300-y.
19. Paul S, Pusic M, Gillespie C. Medical student lecture attendance versus iTunes U. *Med Educ*. 2015; 49:530–531.
20. Kind T, Genrich G, Sodhi A, Chretien KC. Social media policies at US medical schools. *Med Educ Online*. 2010 Sep 15;15. doi: 10.3402/meo.v15i0.5324.
21. Ozkan, B. & McKenzie, B. (2008). Social Networking Tools for Teacher Education. In K. McFerrin, R. Weber, R. Carlsen & D. Willis (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference 2008*.

.....

#### How to cite this article?

Rajendran R, Joena V. Effectiveness of social media as a medical teaching tool. *Int J Med Res Rev* 2017;5(04):381-385 doi:10.17511/ijmrr. 2017.i04.02.

.....