

# Assessing the of Role of Social Media in Dental Education

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## ABSTRACT

**Introduction:** Most of the population is using Social media via smartphones which include many social networking sites such as Wikipedia, Twitter, YouTube, Facebook, Whatsapp and it is also used for vocabulary learning and for health care. In last few decades, social media has brought tremendous changes in whole business, educational and political system in learning and teaching dentistry due to computer and internet used in dental students. In education, colleges and universities are using the Internet and social networking sites as a screening tool. **Aim:** Assessment and role of social media in dental education. **Material and Methodology:** A survey form had prepared with the help of structured questionnaire written in English. The questionnaire which has made by 16 questions related to use of social media along with socio-demographic characters. The questionnaire will be distributed among 500 dental students. Out of which males were 52 and females were 448. Finally, the ADD-score and SC score will be analyzed by SPSS version 22. **Result:** According to survey 466 (93.2%) students have smartphones. 458 (91%) students use internet for email purpose. 452(90.4%) students for adding comments on facebook. 455 (91%) students use for uploading pictures on facebook. according to 460 (92%) students. Social media improves access to courses and learning material. **Conclusion:** In upcoming time the social media has positive effects on the budding dentists.

**KEYWORDS:** Social media, Social sites, Dental education, Wifi

## INTRODUCTION

Social media is such a content that is shared over the internet via technologies. It promotes Engagement (connecting the people), sharing the information and for collaboration.<sup>1</sup> Social media, by contrast, have been defined as “Social media refers to the means of interactions among people in which they create, share, and exchange information and ideas in virtual communities and networks”.<sup>2</sup>

Most of the population is using Social media via smartphones which include many social networking sites and it is widely spread currently. Basically, it is used for purposes of collaborative projects such as Wikipedia, blogs or microblogs such as Twitter, content communities such as YouTube, Facebook, Whatsapp and virtual gaming or social worlds such as Second Life. And it is also used for vocabulary learning and for health care.<sup>1</sup>

In last few decades, information and communication technology in social media has brought tremendous changes in whole business, educational and political system. Dental education is no exception. Profound changes have occurred in learning and teaching dentistry due to computer and internet used in dental students, especially in developed countries. Mobile device today has become one significant parameter of ‘computer literacy’. Recently, the internet is the biggest library to

students. A worldwide computer network is allowing communication among million of users access through different resources. For this evolution, drastic changes have occurred in health care system. Technology is revolutionizing, medical as well as dental education; a student can now access vast quantities of information from the variety of sources at their own convenience and from virtually any location. Social media initially provided a means for socialization but are increasingly use for education purpose. 85% of medical students and faculty uses smartphones daily.<sup>3</sup>

In academics, schools and colleges are utilizing the internet and social networking sites communication locales as a screening device. More planned competitors and understudies are being assessed on their computerized impression notwithstanding customary criteria.<sup>4</sup> The social media provides a variety of educational approaches, entertainment, and advertising, the latter it will be used for providing information to patients and public in dental and medical professionals. The lower cost of the internet as compared to paper based dissemination of information and being available worldwide instantly on demand, provides a cost effective medium of communication for health care professionals and has important implications for dental education. 75% of adults age 18-24 years and 57% of adult age 25-34 years use social networking sites. With more than 800 million dynamic users, online networking is turning into

How to cite this article:

Sen S, Sarode SS, Ilahi AI, Sarode SS, Deolia S, Sen RC. Assessing the of Role of Social Media in Dental Education. *Int J Oral Health Med Res* 2016;3(3):10-15.

the way individuals convey, search for and offer data among all age groups. With the use social media so common it does not surprise the doctors, hospitals and other health care professional are using social media to market, communicate and connect with the patients. In 2007 and 2008, universities were using social media to research potential students. 2009, it was assessed that 255 health sectors in the United States use social networking communication tools, and 167 have the twitter account. 2011, survey on general college admissions officers using social media 24% of the time when evaluating potential applicants. 2012, Article in journal dental education called for robust research and action in the area of social media "Based on lack of professional discourse in the dental education literature regarding the use of social media".<sup>5</sup>

Advances of social media in dental education are to send instructional messages in a flexible way for discussions.

Due to recent technologies, including android and apple iPhones, tablets, pocket PC's instructors and students can communicate through voice message and image as well as text.<sup>6</sup>

Hence the aim of the study is assessment and role of social media in dental education.

## MATERIALS AND METHODS

Self-administrated questionnaire was used. A survey form had prepared with the help of structured questionnaire written in English. The questionnaire which has made by 16 questions related to the use of social media along with socio-demographic characteristics had created and reviewed by a panel of experts for content, reliability, and validity. The questionnaire was distributed to 500 dental students who were present on the days and provided consent. The questionnaire was in the form of multiple choice questions in which participants had instructed to choose only one response. It was later checked by the researcher that none of the item was left un-attempted before submission. With the end goal of examination, each right reply had given score 'one', and 2 open-ended sections had given for comments related to the topic. Finally, the ADD-score and SC score were analyzed by SPSS version 11.5.

## RESULTS

Table 1 depicted that most of the students were belongs to the age range of 20 – 24 years. Table 2 shows that female students were more against their male counterpart. Table 3 observed that questionnaire wise frequency distribution of responses of study subjects

## DISCUSSION

The study shows that people who are less than 25 years use mobile phones more than people older than 25 years. According to Lan YF et al. shows that college students

use mobile phones more than graduate students.<sup>1</sup>The result shows similarity because mostly college students

Age in years	Frequency	Percent
20.00	30	6.0
21.00	129	25.8
22.00	125	25.0
23.00	97	19.4
24.00	38	7.6
25.00	21	4.2
26.00	21	4.2
27.00	18	3.6
28.00	9	1.8
29.00	6	1.2
30.00	3	.6
32.00	3	.6
Total	500	100.0

Table 1: Age wise distribution of study subjects

Gender	Frequency	Percent
Male	52	10.4
Female	448	89.6
Total	500	100.0

Table 2: Gender wise distribution of study subjects

are of age less than 25 years. The common age group for college students is below 25 years only.

According to this study female i.e., 89.6% using mobile phones are more than males i.e. 10.6%. According to Bain JD et al., it shows that female learners achieved higher scores than male learners.<sup>2</sup> The result is same because mostly dental students are female rather than male. Recently females prefer dentistry more than males because in dentistry working time is less.

The students don't prefer to have a part time job are more than those who prefer. Because they are busy in their studies that they don't get time for other work. They have lots of professional work like projects, research works, studies and journal completion, so they don't get time for part time jobs.

A study conducted by Rung A et al., showed that students have access to wifi internet at university.<sup>3</sup> While, a study conducted shows that 58.2% students use wifi at home and university, while other than home and university the wifi usage is 15%. The result is same because students have internet related work in university like research, seminars, etc. and at home students are engaged in leisure work like social networking sites, so they use the internet. In university and home, students are busy with their study related works or they are using social medias for time pass, so they use the internet.

Almost 93.2% students use smartphones. The study shows that almost every student uses the smartphone for daily works like for learning, SMS, research, seminars.

A study conducted by Kim D et al. showed that students use more android phones, iphones, and tablets than other phone.<sup>4</sup> The study conducted shows that 70.4% students use android phones and 12% uses iphones. The result shows the similarity with the android phone because these phones are easily available in the market with different varieties and a reasonable cost and the result

also shows similarity with iPhone because this is unique and top most brand in all phones and always available with some new technologies.

A study conducted by Kim D et al. showed that the students use limited data allowance.<sup>4</sup> while the study conducted by Schulz P et al. showed that students use unlimited data allowance.<sup>5</sup> A study showed that 84.6% students have limited data allowance. The result shows the similarity because the limited data is low in cost with a valid period. The result shows the dissimilarity because the internet package is very high in cost and available for a valid period only.

A study conducted by Rung A et al. shows that the college students use wireless connection as well as 3G mobile facility.<sup>3</sup> A study showed that 58.6% students use Wi-Fi and 3G mobile carrier. The result shows the similarity because now a day's Wi-Fi service is provided in colleges.

A study conducted by Stockwell G, shows that the students like to use PC, iPads, tablets more than mobile phones.<sup>6</sup> A study showed that 30% of students have or use mobile tablets. The result shows similarity because students are more convenient on large screen devices and also on a large keypad.

According to a study conducted by Spallek H et al., the general use of social media was found to be more for E-mailing, discussion with colleagues.<sup>7</sup> The study showed that 91.6% of students use social media for the same purpose.

According to the same study, students upload videos on the web in intention for learning purposes is more as compared to the general population which is found to be similar to this study which is around 91%.

According to a study conducted by Wong LH et al., students prefer social media more for managing their schedule. As per another study, this is similar, which was

found to be 84.4% nowadays as it is in ease to them and as this is an era of e-generation.<sup>8</sup>

According to a study by Marry M, use of social media for uploading pictures and editing pictures and videos is found to be on a higher rate as they use to share valuable connection to faraway family and friends who tied together in variety of ways,<sup>9</sup> which is found to be similar to this study that is, 91% and 87.6% respectively.

According to a study by Spallek H et al., social networking sites like Facebook is used for adding comments on something posted on it like any pictures and listening instructional audio clips is more as students nowadays are connected more with this networking sites than through verbal communication.<sup>10</sup> And according to this study, the results show similarity i.e. 90.4% for adding comments on social networking sites, 88% for listening instructional audio clips from the internet and 86.2% to record clinical procedures/instructional videos.

Also, it was found in the study, that role of social media to creating and editing text is not at that much higher percent i.e., it is found to be 84% and the students not using it is found to be 78%.

According to this study, use of smartphones in synchronization with a home computer is found to be 77.8% which is dissimilar with the result found by Glenn Stockwell which shows that smartphones and computers when used in conjunction the mobile phone took much time as compared to home computers.<sup>6</sup> And that's why they used computers for further study and not the smartphones.

According to a study conducted by Kim D et al. showed that students use mobile phones for communication purposes like share their syllabus and timetables too.<sup>4</sup> According to a study conducted by us, 86.2% of students use mobile phones for sharing their course timetable through networking apps. Both the results show

Sl. No.	Questions	Response	Frequency	Percent
1.	Do you have a part time job at the side of your studies	Yes	57	11.4
		No	443	88.6
2.	Do you have access to WiFi internet?	At Home		
		Yes	291	58.2
		No	209	41.8
		At University		
		Yes	277	55.4
		No	223	44.6
		Total	500	100.0
		Elsewhere		
		Yes	78	15.6
		No	422	84.4
3.	Do you have a Smartphone?	Yes	34	6.8
		No	466	93.2
4.	What type of Smartphone do you have?	Android based		
			352	70.4
		Iphone		
			60	12.0
		Windows based		
			43	8.6
		Blackberry		
	24	4.8		
		Android based & Iphone		
		10	2.0	
		Android based & Windows based		
		6	1.2	
		Android based & Blackberry		
		5	1.0	
5.	Does your mobile phone contract allow for internet data use through 3G Network?	Yes, limited amount of data per month		
			423	84.6
		Yes, unlimited amount of data per month		
		62	12.4	
		No, I don't have data allowance		
		15	3.0	
6.	Do you access the internet with your smartphone?	Yes, Through WiFi connection ONLY		
			81	16.2
		Through Wifi and my 3G mobile carrier		
			293	58.6
		Yes, through my 3G mobile carrier ONLY		
		117	23.4	
		No, I don't use my smartphone for internet access		
		9	1.8	

7.	Which of the following best describes whether you own or are interested in getting mobile tablet device (ex. Apple iPad, Samsung Galaxy Tab) ?	I have a mobile tablet device right now	150	30.0	
		I am likely to get a mobile tablet device within the next year	94	18.8	
		I am unlikely to get a mobile tablet device within the next year	256	51.2	
8.	Can you	E- Mail?	Yes	458	91.6
			No	42	8.4
		Discuss your work with colleagues through internet?	Yes	455	91.0
			No	45	9.0
		Add comments in social media e.g. Facebook?	Yes	452	90.4
			No	48	9.6
		Listen to instructional audio clips from the internet?	Yes	440	88.0
			No	60	12.0
		Manage your schedule?	Yes	422	84.4
			No	78	15.6
		Take pictures?	Yes	470	94.0
			No	30	6.0
		Record clinical procedures/ instructional videos?	Yes	431	86.2
			No	69	13.8
		Upload pictures on the web e.g. facebook?	Yes	455	91.0
			No	45	9.0
Upload videos on the web e.g. youtube?	Yes	290	58.0		
	No	207	41.4		
	Edit pictures/videos?	Yes	438	87.6	
		No	62	12.4	
	Create and edit texts?	Yes	422	84.4	
		No	78	15.6	
	Synchronize with your home computer?	Yes	389	77.8	
		No	111	22.2	
9.	Can you share your course timetable through networking apps (facebook, whatsapp)?	Yes	431	86.2	
		No	69	13.8	
10.	Can you look up/place announcements on social media sites?	Yes	419	83.8	
		No	81	16.2	
11.	Do you share links with staff/colleagues on social media?	Yes	391	78.2	
		No	109	21.8	
12.	Do you read/share educational articles uploaded on social networking apps (facebook, whatsapp)	Yes	440	88.0	
		No	57	11.4	
13.	Do you follow any educational groups on social media (eg. Facebook/twitter)?	Yes	437	87.4	
		No	63	12.6	
14.	Do you watch instructional videos uploaded on the internet?	Yes	437	87.4	
		No	63	12.6	
15.	Do you discuss cases on networking apps (facebook/whatsapp)?	Yes	391	78.2	
		No	109	21.8	
16.	Do you surf the web for learning material?	Yes	428	85.6	
		No	72	14.4	
17.	Do you share notes with colleagues networking apps (facebook/whatsapp)?	Yes	425	85.0	
		No	75	15.0	
18.	Do you upload photos of your work?	Yes	375	75.0	
		No	125	25.0	
19.	Do you share videos of your work	Yes	304	60.8	
		No	196	39.2	
20.	Do you have any applications related to Dentistry or Education?	Yes	377	75.4	
		No	120	24.0	
21.	Where do you normally use your Smartphone for learning activities?	At the library	Regularly	87	17.4
			Often	214	42.8
			Seldom	127	25.4
			Never	72	14.4
		During Tutorials/ workshop	Regularly	59	11.8
			Often	178	35.6
			Seldom	140	28.0
			Never	123	24.6
		Elsewhere on campus	Regularly	165	33.0
			Often	214	42.8
			Seldom	100	20.0
			Never	21	4.2
At home/hostel	Regularly	303	60.6		
	Often	151	30.2		
	Seldom	34	6.8		
	Never	12	2.9		
22.	Do you access social media (facebook, twitter) regularly?	Yes	425	85.0	
		No	75	15.0	
23.	Have you found any value in social media for your education?	Yes	424	84.8	
		No	76	15.2	
24.	Social media improves access to your courses and learning material?	Yes	460	92.0	
		No	40	8.0	
25.	Social media helps you learn more independently?	Yes	416	83.2	
		No	84	16.8	
26.	Social media should be utilized more by university/teaching staff?	Yes	440	88.0	
		No	60	12.0	

Table 3: Questionnaire wise distribution of responses

similarity because now a day's mobile networking apps are widely used by the students. Almost each and every student uses it so it is easy to share timetables and other important notices in the networking apps so that everyone can be aware of the ongoing issues in the college.

According to this study, 83.6% students look up/place announcements on social media sites. The result shows this because students are using mobile phones in a day to day life so any information shared reaches them, and they can be aware of it.

According to Lan YF et al. it showed that in combination with mobile technology with the idea of criminal traffic offenses, the MTVRS, and its usage model can help learners enhance reflection levels of traffic violations through four capacities: getting to, finding, examining, and sharing.<sup>1</sup> According to this study, it shows that 78.2% students use mobile phones for sharing links with staff / colleagues. The result shows similarity because mobile phones are easy to carry everywhere, and mobile phones contain many sharing apps, so it's very easy to share links. According to this study, 88% students read/share educational articles uploaded on social networking apps (facebook, Whatsapp). The result shows similarity because apps like facebook, Whatsapp almost every student uses this app, so it is very easy to share and read educational articles. The apps also have that facility and setting so that it is very convenient to share educational articles and read them.

According to this study, 87.4% students follow any educational groups on social medias (e.g. facebook/twitter). There are many educational groups on social medias which help a student to get in touch with the course and curriculum. It keeps the students aware of the ongoing topic of discussion.

According to a study conducted by Kim D et al. showed that statements from the participants such as "I like watching YouTube videos on my mobile device".<sup>4</sup> The study conducted by us shows 87.4% students watch instructional videos uploaded on the internet. The result shows similarity so doing it for a class assignment made them more excited about it, and they felt that it was convenient and had the advantage of using time effectively.

According to Cavus N et al. showed that the online discussion board was the primary communication tool to facilitate learning activities.<sup>11</sup> The study conducted by us, the result shows 78.2% students discuss cases on networking apps (facebook/Whatsapp). The result shows similarity because students are using various apps, they prepare groups in the apps so that it is very easy to discuss anything on a particular issue.

According to Chen L et al. showed that students use mobile web for surfing learning material.<sup>12</sup> The study conducted by us shows that 85.6% students use mobile web for surfing learning material. The result shows similarity because almost every student having mobile phones in their pocket. If they don't get any learning

material around them and in the books they are having they can surf the web for learning materials.

According to Rung A et al. showed that one-half of the students used their smartphones to take pictures of their work.<sup>3</sup> According to our study, 85% of the students take and upload photos of their work. The result shows similarities as a student are having a mobile phone during their work hours also, so they take pictures of their work and upload them. As per this study, it showed that 60.8% students share institutional videos on social medias so that every student can see and learn from the videos.

According to a study by Adithya KH et al. showed a model of students acknowledgment of person to person communication locales for wellbeing and health data was proposed, and suggestions for planning social stages to support better health informations were discovered,<sup>13</sup> which same as per this study also that is around 75.4%.

According to this study, students using smartphones for learning activities in the library is often i.e. around 42.8% which is found to be same as the study conducted by Adithya KH et al. which shows that students use smartphones to assess scholarly information available through the library specifically, the authors were interested in finding out: (i) how often students use the internet and for what purpose; (ii) what devices they use to assess library information remotely. The study found that the majority of students surveyed do not readily identify them as a means to assess library-provided databases, the library catalog or to retrieve full-text journal articles on demand or on to go.<sup>13</sup> According to study students using smartphones during tutorials/workshops and anywhere in the campus is often found to be around 35.6% and 42.8% respectively.

The study shows that use of smartphones at home or hostels for learning activities is regular i.e. around 60.6%. It is found to be same as per the study conducted by Zhang H et al. showed that students use smartphones at home or hostels for vocabulary learning as there is no interaction or gossiping with the colleagues, and students use their smartphones for learning purposes only.<sup>14</sup>

According to study, use of social media regularly for sites like facebook, twitter is 85%, the result is found to be same in accordance with study conducted by Spallek H et al. As this are the most using sites by the students regularly as many of them depend on interpersonal interaction stages to deal with their day by day communications-sharing links, photos, videos, news and status updates with a growing network of contacts.<sup>10</sup>

The study conducted by Henry RK et al. showed that there is a value of social media in education in many ways.<sup>15</sup> The study conducted by us shows that 84.8% students think that there is a value of social in education. According to a study conducted by Zhang H et al. showed that social media is used for learning vocabulary, for presentations.

Wong LH et al. showed an excellent platform for student discussion. It is important that the teacher holds back her

corrective comments to encourage debates among students on diversified views. The relational word learning action was restricted to a coincidental school-based formal lesson with brief understudy presentations and exchanges occurred after the photograph taking exercises, and every understudy antiquity was dealt with as a standalone bit of material for the class to judge whether it is right or off-base. We predict such a customized to-social learning movement procedure to be connected to the learning of other school subjects, for example, in science learning; understudies may bring photographs of articles with various material sorts experienced in their day by day life, order and post them onto the wiki for associate exchanges.<sup>8</sup>

## CONCLUSION

In the modern era, the internet is now being used worldwide for multiple uses including dentistry. This digital media has helped us in expanding our knowledge and learning things which we are not aware of, without this media. It helps the dentists to know about the recent inventions in upcoming. In future, there will be much more expansion in the usage of digital media in the field of education and academic research investigations.

## REFERENCES

- Lan YF, Huang SM. Using Mobile Learning to Improve the Reflection: A Case Study of Traffic Violation. *Educational Technology & Society* 2012;15(2):179–193.
- Bain JD, Ballantyne R, Packer J, Mills C. Using journal writing to enhance student teachers' reflectivity during field experience placements. *Teachers and Teaching* 1999;5(1):51–73.
- Rung A, Wrnke F, Matheos N. Investigating the use of smartphones for learning purposes by Australian Dental students. *JMIR mhealth uhealth* 2014;2(2).e20.
- Kim D, Rueckert D, Kim DJ, Seo D. Students perceptions and experiences of mobile learning. *Language learning and technology* 2013;17(3):52-73.
- Schulz P, Sagheb K, Affeldt H, Klumpp H, Taylor K, Walter C, Al-Nawas B. Acceptance of E-Learning Devices by Dental Students 2013;2(2):e6
- Stockwell G. Using mobile phones for vocabulary activities: examining the effects of the platform. *Language Learning & Technology* 2010;14(2):95–110.
- Spallek H, Turner PS, Bartfield DE, Chambers D, McAndrew M, Zarkowski P, KarimbuxN. Social media in dental school environment, Part A: Benefits, Challenges & Recommendations for use. *J Dent Edu* 2015;79(10):1140-52.
- Wong HL, Chin KC, Tan CL, Liu M. Students' Personal and Social Meaning Making in a Chinese Idiom Mobile Learning Environment. *Educational Technology & Society* 2010;13(4):15-26.
- Madden M. Social networking use among those ages 50 and older nearly doubled over the past year. <http://www.pewinternet.org/2010/08/27/older-adults-and-social-media/> (Last accessed on 08.09.2016)
- Heiko S, Marie O. Social media in dental education: A call for research and action. *J Dent Edu* 2012;76(5):279-287.
- Cavus N, Ibrahim D. m-Learning: An experiment in using SMS to support learning new English language words. *British Journal of Educational Technology* 2009;40(1):78–91.
- Chen L, Xie X, Fan X, MaW, Zhang H, Zhou H. A visual attention model for adapting images on small displays. *ACM Multimedia Systems Journal* 2003;9(4):353–364.
- Kumari AH, Ali KS, Mahadevamurthy HH. Use of social media among dental students of Farooqia Dental college/Mysore: A Study. <https://www.researchgate.net/publication/281230094> (Last accessed on 08.09.2016)
- Zhang H, Song W, Burston J. Re-examining the effectiveness of vocabulary learning via mobile phones. *The Turkish Online Journal of Educational Technology* 2011;10(3):203-214.
- Henry RK. The Use of Social Media in Dental Hygiene Programs: A Survey of Program Directors. *J Dent Hyg* 2014;88(4):243-249.

Source of Support: Nil  
Conflict of Interest: Nil