



Use Of Facebook As Teaching Method In Learning Microbiology In Second Year BDS Students

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Introduction :

Information technology has become an integral part of everyone including dental students. Rather technology is transforming dental students and education enormously. Students of the twenty first century belong to a generation that has grown up with universal access to online information and are often referred as digital natives or the Google generation¹.

Students can now access huge quantities of information from a diversity of sources at their own convenience and practically from any location. There are various methods of connectivity through emails, Facebook, WhatsApp etc. which are available at their own mobile and computers very easily.

Social media originally provided for socialization but are gradually used for educational purposes by many students. Using the potential of connectivity through the social media for educational purpose is a talk of the current era. Recent studies have found that including social media tools into traditional educational environments increases student learning and collaborations².

In India, the social media for the purpose of education is hardly being used. Use of android mobiles by the students has increased tremendously in the world and in India. There are various domains available in social media especially Facebook. Facebook is a social networking website where over 750 million individuals share photos, videos, and commentary³.

Initially Facebook was designed for college students only which were open to everyone⁴. It is useful website where you can post a comment and can upload videos, photos very easily. This capacity to communicate effortlessly has altered Facebook into an influential virtual community with endless possibilities.

Considering the easy access through the computers and android mobiles, learning process can be made available to the students by using social media. Learning microbiology through such websites will improve the knowledge amongst the dental students.

- Context of the study :

The present study was undertaken to know the acceptability, feasibility and performance of dental students by using Facebook as teaching method in learning microbiology.

- Materials and methods :

The current study was carried out in Sinhgad Dental College and Hospital Pune from July 2015 to December 2015 as a part of advanced medical education certificate program. The current study is a case control study. Before commencing the study, outline of the project was prepared and submitted to the Principal and after permission was sought, finally submitted to the ethical committee of the college. After ethical clearance the

study was carried out on second year BDS students. Sensitization about the project was done to all students in the second year. The total students in the class were 40. The initial conformation was done about the accessibility to the Facebook through android mobiles or computers at home. All of them had access to the Facebook from their own mobile phones.

All students were given an equal opportunity to participate in the study by assigning the random selection number to avoid the bias of selection. For practical purpose, two groups were made, the Facebook group consisted of 20 students and control group consisted of 20 students. An informed consent was obtained from the Facebook group before participation in the study.

All students were exposed to didactic lectures in the classroom by author only. At the end of the class the information was shared in parts with the Facebook group daily. The active discussion was carried out amongst the Facebook group. Various topics were taught in the class and later shared with the Facebook group only. Interactions with the Facebook group continued on the topics taught in the classroom till the assessment.

A multiple choice question was given to entire classroom on the syllabus taught in the classroom and shared with Facebook group. The marks obtained were entered in the excel sheet and were analyzed statistically. A feedback was also taken from the Facebook group for feasibility and acceptability. They were also asked to comment about the experience they learnt during the project period.

Statistical analysis was done by using chi square tests for statistical significance and p- value of <0.05 was taken as significant.

- Results :

In the present study total 20 students in Facebook group and 20 students in control group were included. Various questions were asked related to acceptability and feasibility etc. through feedback form from the Facebook group. For performance of both groups a multiple choice questionnaires was given and analyzed by chi square tests.

Table 1: Satisfied with the current lecture method (didactic)

Answer	No of students	Percentage (%)
Strongly agree	2	10
Agree	17	85
Disagree	1	5
Total	20	100

85% of students agree that the current method of teaching is satisfactory.

Table no.2: Ready to accept the change in teaching methodology

Answer	No of students	Percentage (%)
Strongly agree	3	15
Agree	13	65

Disagree	4	20
Total	20	100

65% of students agreed for change in the teaching method. 15 % strongly agree for the same. Acceptability was there in the students.

Table no. 3: Feasibility of inclusion of Facebook as teaching method

Answer	No of students	Percentage (%)
Strongly disagree	4	20
Agree	13	65
Disagree	3	15
Total	20	100

65% of students agreed that Facebook is feasible as teaching method.

Table no.4: Chances of learning alone by using facebook

Answer	No of students	Percentage (%)
Strongly agree	1	5
Agree	19	95
Disagree	0	0
Total	20	100

100% students felt that they were able to learn on their own through facebook.

Table no. 5: Learning with teacher as facilitator on Facebook

Answer	No of students	Percentage (%)
Strongly agree	9	45
Agree	11	55
Disagree	0	0
Total	20	100

45% students were in strong agreement that the teacher may act as facilitator while learning through the Facebook

Table no. 6: Performance of Facebook group compared with the control group

	Mean	Number of questions	p - value
FB - right	12.73	15	.049*
C - right	11.20	15	
FB - wrong	7.27	15	.050*
C - wrong	8.80	15	

*Statistically significant

- Performance of Facebook group was found statistically significant than the control group in giving correct answers ($p < 0.049$).
- Discussion :

Social media can help in providing enriched and varied active learning atmospheres that are student centered as well as collaborative. However, a significant generation gap is obstructing the integration of social media and technologies into health care courses especially in dental health care education.

Students today are proficient of multi-tasking and that their routine use of social media have no effect on learning⁵. In view of increase in use of social media for sharing thoughts, posts, photos by the students, we had decided to utilize this potential in learning microbiology through use of Facebook.

The present study was undertaken to know the acceptability, feasibility and performance of the students after use of Facebook as teaching learning method. We had taken feedback from the students on various aspects such as feasibility, acceptability, teacher as moderators etc.

This is the first study where facebook has been used as teaching method in learning microbiology in dental students in India as per our knowledge. There are hardly any references to compare the responses from the present study with other studies published.

Table 1 show 85% students were in agreement as the current method (didactic) of teaching is satisfactory. But students who had participated showed positive response in incorporating newer methodologies such as use of Facebook for learning methods. Table 2 showed that almost 80% agreed or strongly agreed to incorporate the idea of Facebook as teaching learning method. This showed a positive reaction on the acceptability of Facebook as teaching learning method. This response might be due to easy access to the Facebook through their android mobiles and there is no fear of teacher asking questions directly.

While we had asked them about the feasibility of use of Facebook as teaching learning method, 65% of students agree that it was feasible but 35% students answered as strongly disagree or disagree (Table 3). This difference of opinion was due to the various reasons. When we had interacted with them they gave reasons such as non-availability of internet at hostels, costs involved in the internet etc.

All students agreed that they can learn themselves also by using Facebook (Table 4). While 45% students strongly agree that they would prefer teacher as a moderator during use of Facebook as teaching learning method (Table 5).

The present study participants were comfortable in using Facebook as teaching learning method which is in agreement with the study carried out by El Tantawi⁶. They found out that majority of students were comfortable in writing posts or comments on social media than speaking in class.

We also evaluated the performance of all students by conducting formative type assessment with MCQ tests on topics taught in didactic lecture and later shared with Facebook group (Table 6). More answers were correct from Facebook group as compared to the control group which was statistically significant ($p < 0.049$).

The participating students also gave good feedback about the idea as use of Facebook as teaching learning method. They enjoyed the session and gave positive comments.

- What was your learning experience while carrying out the project (factors that favored or helped in implementation of your project / Any obstacles or hurdles that you faced) :

It was overall good experience when interacting with students during the project. All of them showed interest, but due to case control educational interventional project, all of them could not get the chance to be the part of study. Few problems which I have faced during the study were:

1. Uniform and continuous non availability of internet to all
2. Students were finding difficulties in net connection at their hostels
3. Initially they were just liking the post but when asked to comment, then activity became interactive
4. Only formative assessment was done with MCQ tests.

A. Project Summary (overall word limit - maximum 500 words)

- The summary should contain Context of the study (Word limit 100 words out of 500)

Information technology is a boost to all human to interact through various social media such as Facebook. Everyone is well aware of the use of these technologies for various purposes such as sharing their thoughts, photos etc.

Every student has got android mobile phone or computer of their own from which they can access the knowledge from anywhere at their ease. A thought of using this potential of student was in the mid as a teacher of microbiology.

So, decided after going through the extensive faculty development program in regional center Aundh of MUHS as advance course MET.

Learning microbiology is little difficult for students and especially for dental students. They have a full microbiology curriculum in their second year BDS course.

Use of social media as teaching learning methodology was one of innovative idea which has been never tried in India as per our knowledge. Only few studies have been done in western countries for efficacy.

So the present study was taken to know the feasibility, acceptability and the performance.

The overall feedback was very good about the concept and idea of learning microbiology with the help of Facebook. Students have provided very positive feedback about the project. Even the Facebook group performed well than the controls group. But this is very preliminary type of study and need more time and continuous efforts to see long term effects.

But overall activity was very much interactive during project work. They requested to continue further also.