

## USING FACEBOOK® FOR TEACHING AND LEARNING IN UNDERGRADUATE MEDICAL EDUCATION

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### ABSTRACT

Social networks and microblogs are currently considered as very common communication tools extremely popular worldwide, that have progressively gained a foothold in academic education. Many studies reported some advantages of social media use in both undergraduate and continuous medical education. The present article reports the experience of using Facebook® as a complementary tool in teaching physiology to second year medical students in Oujda, Morocco. It focuses on the potential benefits of using social media in teaching physiology, and the remaining pertinent challenges.

**Key words:** Facebook, Learning, Medical Education Teaching, Social Media.

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### INTRODUCTION

Recent developments in information and communication technologies have revolutionized different aspects of our daily lives, allowing people to connect virtually and instantly exchange information in various fields. Social networking and microblogging are nowadays considered as very common communication tools extremely popular worldwide, that have progressively gained a foothold in academic education [1]. Indeed, recent studies have shown the growing interest of universities in integrating these new and appealing tools as more effective ways to reach and connect with their students [2-4].

It seems largely admitted that the current generation of students, often referred to as "Digital Natives" is more resistant to traditional teaching and learning methods, and rather attracted by new technologies as learning tools [5-6]. A recent survey revealed that the majority of health professions students prefer online media as primary source of information, as a simple click from any mobile

device (laptop, smart phone, tablet, netbook...) can directly take them to the information, anytime and anywhere [7]. Moreover, considering the amount of time these students spend on microblogging and social networking, it makes it easier for the educators to connect with the students, share information and interact with them through the social networking platforms than in the classrooms. Facebook ([www.facebook.com](http://www.facebook.com)) is the most popular online social networking service. Since its launch in 2004, the number of its users has increased exponentially, to reach 1.23 billion active users by the end of 2013, with more than 700 million users logging in daily [8]. In the faculty of medicine of Oujda, Facebook is largely used by medical students, as the main communication tool. We can find on Facebook, private groups gathering medical students from each level, where they can exchange information about courses, teachers and exams. In these groups, students share their notes, answer each other's questions and queries, and give advice to younger fellows. Facebook is also used by the faculty administration services to announce

important information to students such as lessons schedules, and examination results.

Given the popularity of Facebook among our faculty students community, it was very appealing to extend its use to academic purposes in engaging more lively and interactive professor-student relationship. The present article reports the experience of using Facebook as a complementary tool in teaching physiology to second year medical students in Oujda, Morocco.

### Methods:

Physiology of the nervous system is part of a mandatory module for second year medical students in Oujda Medical School. It is taught as lectures in a large enrollment class of around 250 students. At the end of the last lecture, in March 2014, the students were invited to “like” a Facebook page that was dedicated to communicate with the lecturer if any questions should arise during later revision of the lessons. The Facebook page was set up and managed by the lecturer, who dedicated a few minutes every day to keep it lively, updated and well maintained. It was an open page, whose content was available not only to second year students but also to anybody willing to check the page.

(<https://www.facebook.com/pages/Physiologie-syst%C3%A8me-nerveux-FMPO/435098196593247?ref=hl>).

The page wall was mainly used by the lecturer, who was the page administrator (Admin), to share links to multimedia resources (pictures, videos, schemes) and verified electronic information sources that are consistent with the study subject (Physiology of the nervous system), and also to post some motivating messages at a regular basis. Students were invited to share their questions about the course, either directly by posting them on the page wall or by sending a private message to the page admin, if they preferred their identity to remain anonymous, and then the admin posted these anonymous questions on the open wall of the page. The students were encouraged to answer each other questions by posting commentaries to each question. Then the lecturer reacted to the students' different answers and participations, and gave the correct answer at last, whenever necessary.

After the final exam, all of the page users were asked to complete online a satisfaction survey to

assess the usefulness of the Facebook page in different aspects. The survey was conceived by the lecturer using the free online SurveyMonkey® site.

### Results:

By the end of the first week after its launch, the Facebook page counted 288 likers (persons who liked the page and who were systematically informed whenever a new information was posted), most of them being actual students in second year of medical studies. This number jumped to 557 likers at the end of the first month, including medical students from different other levels and even students from other institutions.

In a month's time, 34 questions related to the lessons and exams were shared and answered by the students on the page. For some questions, students had to make an extra-effort of research before suggesting an answer, and every time, the student who asked the question expressed his/her satisfaction with the answers given either by his/her peers or by the lecturer.

84 students took part in the satisfaction survey, with 67 (79.8 %) being students from the physiology class of Oujda medical school, 16 (19%) were students from the same faculty but belonging to other levels, and 1 (1.2 %) was from another institution (Faculty of biology).

Table 1 summarizes the participants' answers to the survey questions. Most of the participants (71%) were not active on the page. 98% of the participants found the page useful with a satisfactory interaction with the page Admin, and all of them would like to see similar Facebook pages for other medical courses. The participants pointed out the strengths of the page as being a modern communication tool that better suits the youth, providing supplementary interesting material to better assimilate one's lessons and allowing a direct access to the teacher at any time which is reassuring especially in the period of preparation for exams. As for weaknesses, 3 students expressed their concern about the possibility of expending the exam subjects to every single idea that was discussed on the page, and which was not always closely linked to the lessons taught during lectures. Moreover, one student pointed out that Facebook might be a source of distraction for students especially when they were preparing for exams.

**Table I. Participants' answers to the survey questions**

Survey Items	Number (%)
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What activity did you have on the page?	
Asking questions	22 (26%)
Answering questions	14 (17%)
Passive viewer	60 (71%)
How useful was the page to you?	
Extremely useful	29 (34.5%)
Very useful	33 (39.5%)
Useful	20 (24%)
Little useful	2 (2%)
Not at all useful	0
How good was the interaction with the Lecturer through the page?	
Excellent	38 (45.3%)
Good	32 (38%)
Satisfactory	13 (15.5%)
Unsatisfactory	1 (1.2%)
Poor	0
What are the strengths (advantages) of the present page?	
Possibility to interact with the teacher at any time	69 (82%)
Modern communication tool appealing to the youth	58 (69%)
Supplementary resources to better understand the lessons	58 (69%)
Psychological support	45 (53.5%)
Interaction with other students	30 (35.5%)
Might replace the lecture itself	5 (6%)
What are the weaknesses (disadvantages) of this page?	
None	13 (15.5%)
New information that might be included in the exam	3 (3.5%)
Facebook is a source of distraction during revisions	1 (1.2%)
How likely would you recommend the page to other students?	
I have already recommended the page	30 (36%)
Very likely	35 (41.5%)
likely	19 (22.5%)
Not likely	0
Would you like to have similar Facebook pages for other modules?	
Yes very much, it would be very useful	74 (88%)
Why not? it might be useful	10 (12%)
No. It's completely useless	0

## DISCUSSION

This article reports a single experience of using Facebook as a complementary tool in teaching physiology to second year medical students in the Faculty of Medicine of Oujda. It focuses on the potential benefits of using social media in teaching physiology, and the challenges that remain pertinent.

The survey results support that using FB as an educational tool was very beneficial to a substantive number of undergraduate medical students in the physiology course. To our understanding, the most important aspect of this experience success was the possibility for the learners to interact with their teacher at any time outside the classroom, knowing that their questions will be answered. Moreover, it even encouraged students to ask questions they would not feel comfortable to ask in class, as there was a possibility to do so anonymously and in the absence of the face-to-face interaction that might be challenging to some students.

In our Faculty of Medicine, as in most of Moroccan higher education institutions, the traditional lecture, usually delivered in large enrollment classes, is still the standard teaching method. Lectures might be a good and easy way to convey information, but they are hardly effective in developing skills or changing attitudes [9]. Lectures have been strongly criticized, and usually referred to as a passive method of teaching where “the information goes from the lecturer’s notes straight to the student’s notes without passing through the brain of either”; a quote generally attributed to Mark Twain [10]. Today, it has become very easy for the students to access any information they need for their courses. Widely available and free online information resources in every single field have made learning content easily and instantaneously available for students to download, with a mouse click. Consequently, teachers, whose mission used to be delivering information, might seem to be useless to the current learners who can even read faster than the teachers can talk. The challenge for higher

education mediators, nowadays, is to foster the development of critical reading and thinking skills, especially in medical schools. That cannot be achieved without engaging the students in active learning strategies, which have proven their efficiency in enhancing the learning capacities [5], such as student-centered approaches, small group work and problem based learning [9]. These methods are based on the active engagement of the learner, with constant feedback from the teacher or tutor who both reinforces the gains and corrects the mistakes, allowing the student to modify his/her thinking or behavior in order to improve the learning process [9].

We are aware that such methods can hardly be applied in young institutions with limited teaching staff and large number of students like Oujda medical school. Thus, using social media as a complementary tool of teaching can be a good alternative to improve the interaction with the students especially that the lectures' setting doesn't allow much of it. On the other hand, using social media offers an informal communication environment that breaks the traditional power of hierarchy between the learners and the teachers [5]. And as pointed out by some surveyed students, interacting with their professor using Facebook, made them think of her as a "cool" person that can be easily approached and asked. It encouraged them to ask more questions and to engage more effectively in learning their lessons. It also enforced their professor-student relationships and made them double their efforts in order not to disappoint their professor in the exam.

However, with all the advantages cited above, using social media for educational purposes in medical schools does not seem to be a good enough solution to engage students in active learning. Indeed, 71% of our page users were mere passive viewers. They followed and read all the information that was exchanged but never asked questions nor offered to answer them. And yet, most of them were satisfied from the experience as it allowed them to read the answers of other students' questions, which helped them answer their own.

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