

# Facebook and Dental Education: What Do Students Like?

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## Abstract

**Objectives:** To examine views and attitudes of undergraduate dental students toward using Facebook as an educational source.

**Methods:** clinical dental students are interviewed in 2016 and asked both open and structured questions regarding their use of Facebook as an educational source.

**Results:** The majority (80%) of dental students reported using Facebook as a source of dental information relate to their study. The most popular topics students look for in Facebook are cavity preparation, tooth extraction, local anesthesia injection, implant-related procedures, and crowns and veneers. More than half of students (51.1%) attribute their use of Facebook to the inadequacy of demonstrations provided in clinical environment, and 46.6% preferred Facebook over traditional teaching because it is more interactive. The scarcity of evidence-based information on Facebook and the absence of direct interaction with educators have been the main reasons for students to think it might hinder their use of Facebook as an educational source.

**Conclusion:** Most dental students use Facebook as an educational source. Facebook provides important educational opportunities for both dental students and educators, but the scarcity of reliable evidence-based information on this media limits its usefulness.

**Keywords:** Facebook; dental education; students; social media; learning.

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## Introduction

The outburst of social media applications has redefined the way humans interact socially and professionally. Facebook and other social media platforms are part of daily routine of most people, especially younger age groups. Rightly Facebook is described as” the

international tribe” as more than 2 billion users are estimated to have active accounts on facebook<sup>1</sup>. Deloitte, commissioned by Facebook, has estimated that Facebook enabled 277 Billion US dollars and 4.5 million jobs created globally in 2014<sup>2</sup>.

This exponential growth of social media has led to ethical, professional and commercial

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implications in dental practice. Most regulating dental bodies would have a rather reluctant attitude toward any social media interaction of dentists with their patients. The General Dental Council in UK states that discussions with patients regarding treatments must not be conducted in social media<sup>3, 4</sup>. In a business domain social media might provide dentists, among other professionals, with profound opportunities to grow their businesses and their reach for a wider audiences and potential “customers”<sup>5</sup>. The conflict between maintaining professional relationship and growing dental business was evident in a recent Australian study where nearly 70% of practices surveyed for their Facebook pages compliances with National laws were found to be in breach of such laws<sup>6</sup>.

In dental education the importance of online learning and resource-based learning are well appreciated<sup>7</sup>. Globally dental schools have adopted different e-learning strategies aiming at both maximizing their students' exposure to establish dental practices and introducing novel treatments protocols and new scientific concepts<sup>8,9,10</sup>. The Majority of students who are currently enrolled in dental schools belong to the millennial age while their educators are at least 2-3 decades older. More students are using social media applications than their educators<sup>11</sup>. The upgrade from “teaching” to “learning” is more of a pressing issue from students' perspective<sup>12</sup>. Students would like to have more flexible learning opportunities that are not limited to classroom and traditional teaching processes<sup>13</sup>.

Easier access to information, including medical and dental information, through the Internet, has led to patients<sup>14, 15</sup> and also medical and dental professional using Internet as their first source of healthcare-related information<sup>16 17</sup>. The video sharing platform

, YouTube<sup>TM</sup>, for example is the preferred source to learn and prepare for new surgical techniques among surgical trainees<sup>18</sup>. Learners using social media can surf different dental blogs, podcast, YouTube videos, Facebook pages, Twitter and other platforms<sup>17, 19</sup>. They can view and possibly download contents of those platforms at their own comfort. More interestingly they can also post and upload their own clinical cases and questions and interact with other learners and “experts” beyond the confines of their own dental schools.

On the other hand the overdependence on social media sources to achieve educational and clinical competencies might prove unproductive and sometimes misleading<sup>19, 20</sup>. Most clinical cases are presented on social media as a compilation of photos or video format with limited discussion or evidence to support the treatment strategy undertaken. Long-term follow-ups are generally lacking. The Lack of comprehensive discussion of the cases presented and the potential bias might hinder those “educational resources” of poor value<sup>21</sup>. For example, recent studies showed that the Facebook content on oral cancer is of limited educational values, and YouTube videos related to detection of early childhood caries often contain misleading content<sup>22,23, 24</sup>.

The aim of this study is to establish views and attitudes of undergraduate dental students at the University of Jordan toward using Facebook as an educational source. It also investigates if students share their own cases on Facebook dental forums or not. Their preference toward traditional class based learning or more flexible learning format is also investigated.

## MATERIALS AND METHODS

The study protocol was reviewed and

approved by the School of Dentistry Research Committee at the University of Jordan. The study was conducted in full accordance with the World Medical Declaration of Helsinki and conformed to the STROBE statement for observational studies.

A pretested questionnaire was distributed near the end of the academic year (2015-2016) to all 4th- and 5th-year students at their clinical sessions and was returned once completed. Incompletely filled questionnaires were excluded. The questionnaire contained questions about students' demographics, and their use of Facebook as a source for dental education. Students who completely filled the questionnaire were further interviewed individually by one of the co-authors (D.A.B), and asked open questions about the type of dentistry related pages they follow and their posts, the reasons for using Facebook for dental education, and whether they prefer using Facebook as a tool for education over traditional classroom lectures. In addition, students were asked about the types of dentistry-related posts they post on Facebook, and whether they get consent from patients before posting clinical photos on social media.

Statistical analysis was performed using SPSS for Windows release 16.0 (SPSS Inc., Chicago, IL, USA). Descriptive statistics were generated. Chi square test was used to examine differences between groups. Differences were considered significant if P-values were less than 0.05.

## RESULTS

The sample was composed of 135 students (17.8% males and 82.2% females). One hundred and five (77.8%) were from fourth year (*response rate=57.3%*) and 30 (22.2%) were from fifth year (*response rate=20.3%*).

All participants reported having a Facebook account, and the majority (80%) reported using of Facebook as a source of dental information related to their study. The admitted use was not affected by gender, but fourth year students were more frequent users ( $P = 0.01$ ) of Facebook for educational activities.

The most popular topics students looked for in Facebook were cavity preparation, tooth extraction, local anesthesia injection, implant-related procedures, and crowns and veneers (Figure 1). The vast majority of participating students (94.1%) reported liking dentistry related pages or posts on Facebook; 49.6% liked 1-5 pages, 25.9% liked 5-10 pages, and 18.5% liked more than 10 pages. The most liked pages were aesthetic and cosmetic dentistry pages (68.1%), endodontic pages (40.7%), oral medicine pages (23.7%), and implant dentistry pages (17.8%).

Nearly half of the participants (50.4%) reported posting dentistry related questions on Facebook and relying on answers they get. Fourth year students seemed to ask more questions, but the difference was not statistically significant ( $P = 0.08$ ). Nearly one fifth (19.3%) of students reported posting clinical images of their cases; interestingly, none of them obtained a consent that specifically mention posting clinical images on social media.

When students were asked whether they prefer traditional teaching or Facebook pages and posts for learning, 30.4% reported that they prefer Facebook over traditional teaching lectures. The reasons that they prefer Facebook varied but nearly half of participants preferred Facebook (46.6%) because it is more interactive (Table 1). On the other hand traditional teaching was preferred by 40.6% of participants because they believed that it provides an evidence-based

information (51.1%) and allows a direct interaction with colleagues and professors (42.2%) (Table 1). The majority of students (82%), however, particularly fourth year ( $P = 0.027$ ), thought that having Facebook pages and posts links presented during lectures would help improve the learning process.

## DISCUSSION

Internet and social media has been a common-place in almost every life. The impact this “virtual world” had on individuals and communities is profound. Worldwide, Facebook is the most used social media platform; 89% of the social media users in Jordan are active users of Facebook and 93% of those are accessing it on daily basis <sup>25</sup>.

Dental educators and learners have limitless chances of active engagement on social media platforms <sup>26</sup>. The impact of social media, as an open-source learning tool, on dental students achieving their educational objectives is yet unclear and poorly studied on empirical levels <sup>3, 27, 28</sup>. The all-glorious treatment photos and videos posted in most of social media platforms might not provide dental learners, especially those at the start of their dental careers, with the critical eye necessary to realize limits of treatments modalities presented <sup>29</sup>. Reliable evidence-based information to support students on social media platforms is not easily accessible <sup>30</sup>. Access to evidence based information was the first reason why majority of students interviewed favored class-based learning.

Facebook and other social media applications allow “end users” to interact and share their own cases, thoughts and discussions. Most of the cohort interviewed in this study actually presented their patients’ cases on Facebook. These postings were not liaised with

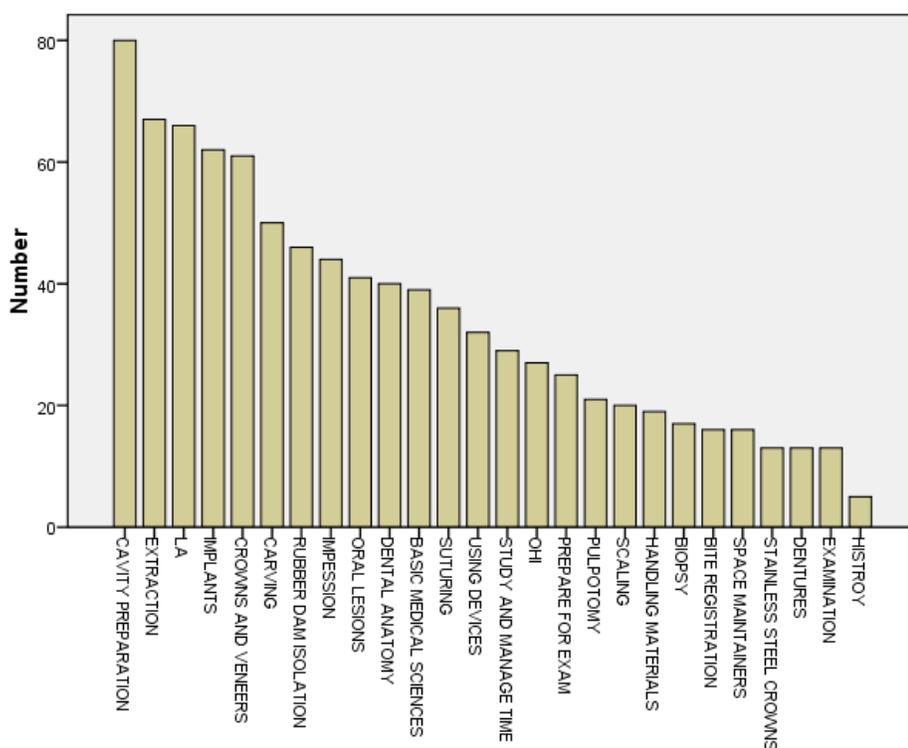
their own supervisors as most of them suggested. Maintaining professional conduct with secure management of patients’ data in social media applications might prove difficult to monitor <sup>31</sup>. This might have detrimental effects on the learners themselves and their institutions if professional conduct is not strictly followed <sup>28</sup>.

Dental educators might benefit from more active social media discussions with their actual and “virtual” learners. Specifically involvement of those educators in Facebook groups organized by students on their institutions might enable them to enhance accuracy of clinical information discussed and identify possible problems <sup>32</sup>. They can promote their evidence-based practices and yield more visibility of their own research and clinical practice that could boost their “Altmetrics” <sup>33</sup>. This would also allow their students a better access to reliable and applicable treatment modalities that can be adopted in their daily practices at the dental school and beyond. Learners could also engage in social media peer mentoring where they can post and answer questions pertinent to their patients needs <sup>34</sup>.

The type of dental Facebook pages searched by students reflected mainly the aspects of dentistry they are exposed to during their undergraduate training at our dental school. The Facebook pages “liked” by students were more related to advanced procedures and even Facebook pages for national and regional celebrity dentists. The educational benefits of most of those pages are limited. Explanation and long-term documentation of techniques presented by photos and videos posted on those pages are generally lacking. Furthermore the online “herd mentality” might dampen the effect of any rightful critique of the procedure presented <sup>35</sup>.

The main focus of most of dental schools' Facebook pages, and other social media platforms, is either patients or prospective students. Dental schools Facebook pages dedicated for enrolling students should be encouraged. Privacy setting requirements might differ between institution and countries but having external interactions might be beneficial and provide better dissemination of knowledge.

Code of conducts for sharing clinical cases on social media should be clearly outlined on those pages. Faculty, students and possibly laypersons should be involved in setting such conducts. Empirical studies on the effect of social media platforms on dental students achieving their educational goals are needed.



**Figure 1:** Topics liked by dental students on Facebook

**Table 1:** Ranking of reasons why students like and dislike Facebook as an educational resource

Like to use Facebook as an educational source	Dislike to use Facebook as an educational source
<p>More interactive (46.6%)</p> <p>It provides more relaxing environment (20.7%)</p> <p>It allows convenient timing (19.3%)</p> <p>It allows meeting colleagues from all over the world (18.6%)</p> <p>No need to go to school (17.8%)</p>	<p><b>It doesn't provide evidence based data (51.1%)</b></p> <p><b>It doesn't allow direct interaction with colleagues and educators (42.2%)</b></p> <p><b>It is time consuming and distracting to search Facebook pages for dental information (25.2%)</b></p> <p><b>Not sure where to find the right pages and posts (22.2%)</b></p>

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## الفيسبوك وتعليم طب الأسنان؛ ما هي الأشياء التي يرغب طلاب طب الأسنان بالتفاعل معها على وسائل التواصل الاجتماعي

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### الملخص

**الأهداف:** معرفة توجهات وراء طلبة طب الأسنان بخصوص استخدام الفيسبوك كأداة تعلم .  
**الطريقة:** تم مقابلة طلبة المرحلة السريرية في كلية طب الأسنان في العام ٢٠١٦ وتسجيل إجاباتهم عن أسئلة ذات إجابات محددة وأسئلة ذات إجابات مفتوحة بخصوص استخدامهم الفيسبوك كوسيلة تعلم ومعرفة الكفايات والمهارات الخاصة بطب الأسنان.  
**النتائج:** استخدمت الأغلبية (٨٠%) من طلاب طب الأسنان الفيسبوك كوسيلة تعليمية للحصول على معلومات عن طب الأسنان. كانت أكثر الاستخدامات شيوعاً متعلقة بطريقة تحضير الحفر السنية، والتلبسات والقشور الخزفية. أكثر من نصف العينة (٥١,٥%) عزوا استخدامهم الفيسبوك كوسيلة تعلم لعدم كفاية الوسائل الإيضاحية خلال الدروس السريرية في الجامعة. وقد أفاد (٤٦,٦%) بأنهم يفضلون التعلم عن طريق الفيسبوك على استخدام وسائل التعلم التقليدي كون الفيسبوك يتيح تفاعليه أكبر. قلة المعلومات المستندة الى منهج علمي توثيقي على الفيسبوك وغياب القدرة على التواصل المباشر كانت الأسباب الرئيسة التي تحد من استخدام الفيسبوك كوسيلة تعلم لمهارات طب الأسنان.

**الخلاصة:** يستخدم معظم طلاب طب الأسنان الفيسبوك كوسيلة تعلم. يمكن ان يوفر الفيسبوك ووسائل التواصل الاجتماعي الاخرى فرصاً تعليمية لكل من مدرسي طب الأسنان وطلاب طب الأسنان. ضعف المصادر العلمية المحكّمة والموثقة قد يضعف من الفوائد المرجوة لاستخدام منصات التواصل الاجتماعي كأدوات تعلم.

**الكلمات الدالة:** فيسبوك، تعلم، طب الأسنان، الطلبة، وسائل التواصل الاجتماعي.