

Nicole Nutzu

DEN 1200 section OL20

08/07/2021

#### Research Article Review:

Using Instagram as a tool to enhance anatomy learning at two US dental schools

#### Summary of the article

Vuvi H. Nguyen, Elizabeth R. Lyden and Shayla D. Yoachim conducted a case-control study of the use and opinion of students from anatomy courses about social media as an educational tool. The study took place in the fall semester of 2020 in the University of Nebraska Medical Center (UNMC) and the College of Dentistry and University of Texas School of Dentistry (UTSD) and it was published in the *Journal of Dental Education* in January 2021. (<https://pubmed.ncbi.nlm.nih.gov/33913160/>, DOI 10.1002/jdd.12631)

Two faculties from the universities listed above created Instagram pages and used them for their particular anatomy classes. An invitation was sent to a sample size of 400 current students (from the classes of 2021–2024) and recent graduates (class of 2020) from UNMC and UTSD for an online survey and received a letter of information detailing the purpose of the study and 170 students answered the survey. The survey had 50 questions that asked about demographic characteristics, experience with social media, social media usage, student perspective on social media in education, student perspective on professor's Instagram page and student open-ended question.

From the findings the authors concluded that social media was a useful tool for visually heavy courses and that students strongly agreed to apply this tools in their courses.

#### Article information

- Using Instagram as a tool to enhance anatomy learning at two US dental schools
- Vuvi H. Nguyen, Elizabeth R. Lyden and Shayla D. Yoachim.
- Journal of Dental Education. <https://adea.org/jdehomepage/>

- January 2021
- <https://pubmed.ncbi.nlm.nih.gov/33913160/>, DOI 10.1002/jdd.12631
- The authors did not list study sponsors and stated to not have conflicts of interest.

## **Study analysis:**

### **1. Type of study**

Case-control study. It was conducted in the fall semester of 2020 in the University of Nebraska Medical Center (UNMC) and the College of Dentistry and University of Texas School of Dentistry (UTSD).

### **2. Study purpose**

The authors conducted the study to demonstrate the importance of the inclusion of social media, in particular Instagram, as an educational tool in the subject of anatomy. Before this study it was known that new generations utilize technology daily and is essential as part of their study methods. The use of other social media platforms like Facebook, Twitter and Youtube and the studies surrounding this social medias helped the authors understand better how students are using this technology and narrowing the options available of social medias to analyse in this case-control study to Instagram because it features are more tailor for visually rich medical fields, such as dental anatomy. The authors aim to learn what the advantages and disadvantages of the social media Instagram could have for dental students in dental anatomy classes and how gender and generation could create a differential factor in its use.

### **3. Experimental design**

Anatomy faculty from each university (UNMC and UTSD) utilized their Instagram account as an educational tool for their students. The faculty Instagram accounts are @YoachimAnatomy used by UNMC students only and @TheAnatomyDoctor used by UTSD students only.

An invitation was sent to a sample size of 400 current students (from the classes of 2021–2024) and recent graduates (class of 2020) from UNMC and UTSD for an online survey and received a letter of information detailing the purpose of the study. The study does not clarify how the participants were selected and if there was any specific factor to choose the 400 students and it does not have a control group. The survey consisted of 50 questions and the

participants responded using a five point Likert scale. The survey was available for 60 days, it was anonymous and the results were evaluated at the end. The survey asked about demographic characteristics, experience with social media, social media usage, student perspective on social media in education, student perspective on professor's Instagram page and student open-ended question.

The findings were analyzed statistically. "Data was summarized as count and percentages, means, and standard deviations. Fisher's exact test was used to look at associations of gender or generations and social media use with school. The independent sample t-test was used to compare students' perspectives of social media in education and students' perspectives on their professor's Instagram page between the two schools. SAS version 9.4 was used for analysis, and statistical significance was determined by a p-value  $\leq$  0.05. p-values are generated based on non-missing data, as some students did not provide an answer to isolated questions." (Nguyen VH, Lyden ER, Yoachim SD. 2021).

#### **4. Results**

170 students participated in the survey. From the demographic characteristic results researchers found that 84 from UNMC (33 male, 49 female and 2 did not identify) and 86 from UTSD (27 male and 59 female). The students were grouped by two generations, generation Y and Z; Generation Y was born between 1980 and 1994, and Generation Z was born between 1995 and 2015. Of the 86 UTSD students 29.1% are generation Y and 70.9% generation Z. Of the 84 UNMC students 17.9% are generation Y, while 82.1% are generation Z. From the questions on the survey about experience with social media and social media usage the majority of the responders said to have seven or more years using social media and it was established from observing the data that the most used social media by all the students were Facebook used by 96.3% of the responders and Instagram used by 94.4%. One significant result was that UTSD students reported more hours per day spent on social media than UNMC students, 52 students spending more than 2 h per day compared to 28 of UNMC students. Additionally, responders answered questions regarding their intention with social media, 96.9% of all

students indicated using social media as a source of information and 92.5% indicated use for educational purposes.

In the section of the survey asking student perspective on social media in education a five point Likert scale was used, higher score of Likert response indicates increased disagreement (1 = strongly agree, 5 = strongly disagree). The researchers stated "All students agreed that social media was a convenient means of communication with their peers, that it added relevance to what they were learning in anatomy, and provided useful information relevant to dental education" (Nguyen VH, Lyden ER, Yoachim SD. 2021). Students were more likely to strongly agree about the question "I have found useful information relevant to dental education on social media." with a  $1.57 \pm 0.74$  average response for both universities. However they also agreed that social media was a distraction to their studies, with an average response of  $2.11 \pm 1.04$ .

Furthermore, students gave feedback on their professor's Instagram pages. "Despite common intentions with the authors' Instagram pages, the differing content and variables of the two accounts warranted individual evaluation of each cohort's views on their own professor's page". Students from UTSD provided feedback on @TheAnatomyDoctor's page and UNMC students @YoachimAnatomy. Students from both universities strongly agreed that their professor's page has been helpful for their anatomy studies/review (UTSD students =  $1.27 \pm 0.48$ , UNMC students =  $1.22 \pm 0.52$ ). As well, the response for their respective professor's page shows a strong agreement that adds relevance to their learning in class/clinic, to their understanding of anatomy and that is convenient for anatomy review, is engaging, helpful for remote learning during COVID-19 and board preparation. Moreover the students disagreed that their professor's Instagram page is distracting, that they felt stress when seeing their professor's anatomy posts on Instagram, feeling obligated to follow the page and concerns about their privacy.

Gender and generation could make a statistical significance on the answers of the participants. Examiners stated that gender and age could influence the perspective of the students on social media as a tool in education. Females more strongly agreed that social media added relevance to anatomy learning and felt more comfortable asking questions and interacting with their

professor on the social media platform. Also, females more strongly disagreed that their professor's Instagram page was distracting. When differentiating responses by age; generation Z more strongly agreed with using social media as a tool to study in their courses, to clarify questions about anatomy and finding information useful to dental education. Generation Z students had a higher agreement than Generation Y students with finding their respective professor's Instagram page convenient and engaging.

## **5. Conclusions**

Based on their findings the examiners stated that the majority of students at both dental institutions agreed that Instagram is a useful educational tool that could help strengthen content learned. In the open-ended comments most students commented that their faculties anatomy posts on their Instagram page were a good review that help to retain the information learned. The researchers also explained that because anatomy is a visually focused field, Instagram features of shering pictures and videos are suited to make the social media platform a good educational tool. From the findings the researchers concluded that generation Z students more strongly agreed about how useful social media could be in education than generation Y students. The researchers explained that this fact could be attributed to how generation Z wants to access information instantaneously. So as generation Z enrolled in universities the use of technology and social media could be beneficial for their learning. Another factor that also could have affected the results of the survey was that UTSD students were not currently enrolled in anatomy courses. So even though there was an overall agreement that social media was a useful tool, UNMC's students' responses had a higher level of agreement.

As well, the examiners stated that the professor used their Instagram's "story" feature to create no-stake quizzes and polls to assess students on their knowledge of topics seen in class and adjust any content that students are not as proficient in. Also as a tool for students to receive immediate feedback on their responses and auto assess their own knowledge.

Notwithstanding the fact that mainly all student responses were positive on the survey, it is important to know the problems that can come from using social media in the classroom. Nor the professors or students should be

required to use social media for educational purposes and privacy from both parties should be respected. The researchers stated that the use of social media as an educational tool should have clear and appropriate guidelines to ensure digital professionalism between students and professors.

At last, the findings showed that social media can be a valuable tool that can benefit both educators and students. The use of Instagram in educational programs can be a useful tool not only for students currently enrolled in dental and anatomy courses but also for preparing graduated students on their boards preparation.

The authors expressed the need for further investigation on the impact of student participation in course-related Instagram accounts on their learning success.

## **6. Your impression**

I think the study expresses an important idea of how social media is going to become an indispensable factor on education. As we know new generations are more open to the use of technology in their daily life, so the use of those technologies on courses can draw more attention from students. In the field of dental hygiene could be a good resource for students to learn about dental anatomy or head and neck anatomy because those are visually heavy courses and having more tailor information and explanations from the professor could make a good impact on the students learning. One question I got from the article would be how much interaction a student could have with a professor on those informal platforms and what appropriate guidelines would apply to have professional communication.