

# Impact of an Anatomy Themed Snapchat Account on Learner Utilization, Satisfaction, and Assessment Outcomes

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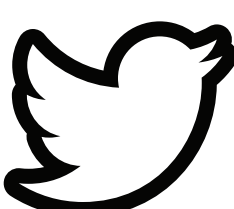
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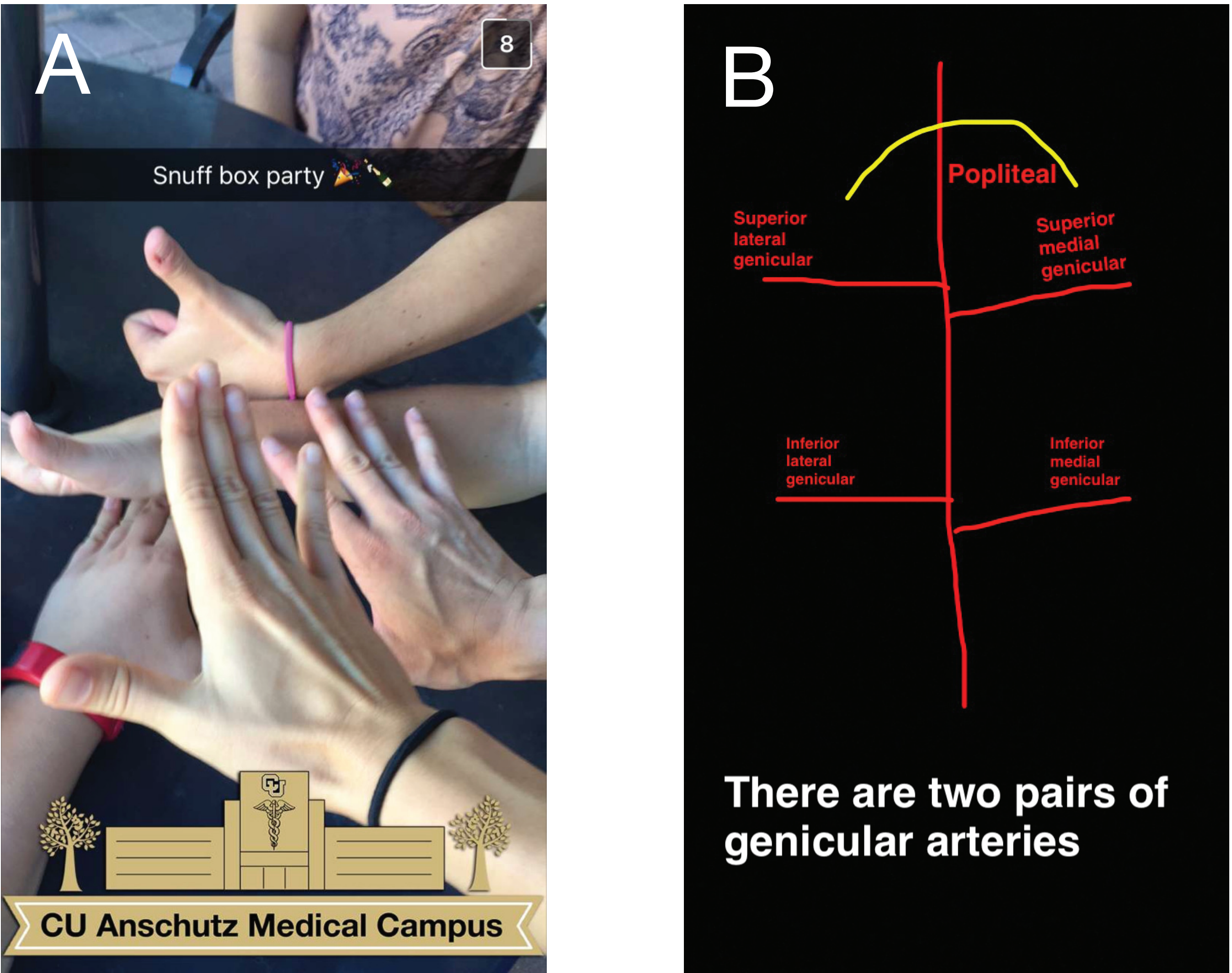
## Background

Social media is an effective method of rapidly disseminating information to a large audience and is appealing to anatomy educators looking for ways to provide review opportunities in response to reduced contact hours.<sup>1</sup> Snapchat is unique due to the ephemeral nature of the content posted, which disappears after 24 hours. Snapchat users have reported paying closer attention to content due to its ephemeral nature.<sup>2</sup> There is a need to determine learner utilization and satisfaction of an anatomy themed Snapchat account and if the potential for closer attention results in improved short- and long-term assessment outcomes.

## Objectives

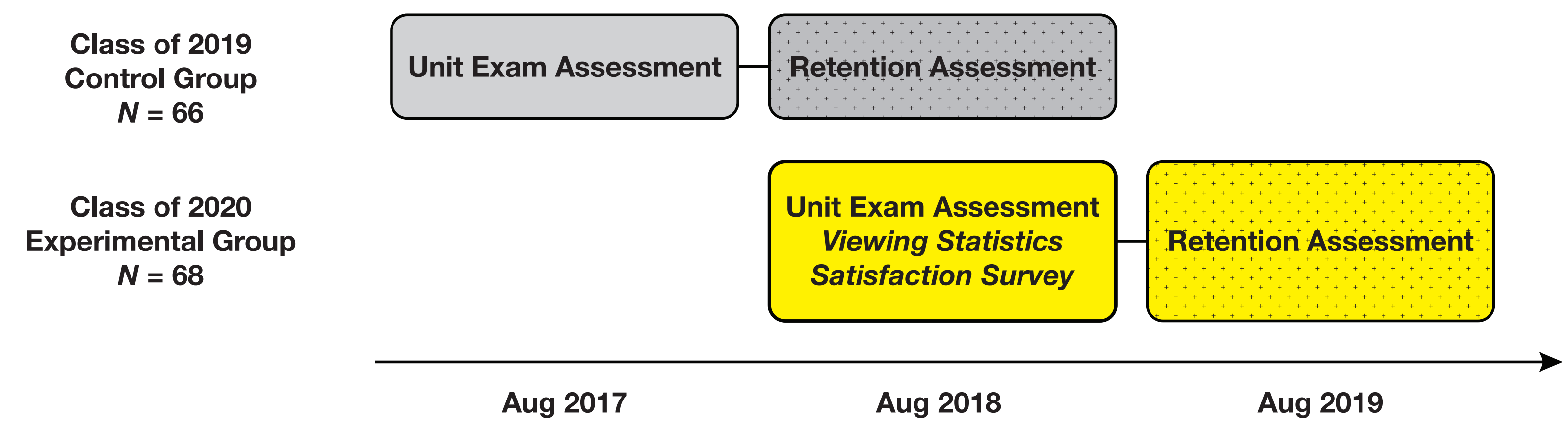
This study was designed to determine the impact of delivering reviews of anatomic concepts using Snapchat on learner utilization, satisfaction, and assessment outcomes.

## Methods, Snapchat Content Delivery



**Figure 1.** A) Smart phone screen shot of a post (“Snap”) using the Snapchat messaging app. This post was displayed for 10 seconds and remained viewable for 24 hours. This example shows a photo with text and a geolocation graphic added. B) Screen shot of one of the blood flow reviews distributed by the anatomy instructor in this study. The arterial supply and venous drainage of the lower limb were selected for this study.

## Methods, Protocol Design



**Figure 2.** The CU PT Class of 2019 served as the control group and was given blood flow diagrams in lecture. The Class of 2020 was invited to participate in the study and had blood flow reviews available on Snapchat. Each group was given an assessment during their anatomy course and one year following to assess retention. The viewing statistics of the Snapchat content were collected and a user satisfaction survey was distributed to the experimental group. These procedures were approved by the COMIRB (protocol# 18-0927).

## Results, Viewing Statistics

Snap Story Subject	Snapshots in Story	Total Account Followers	Started Story (% Total)	Finished Story (% Started)	Total Views
Pelvis arterial supply	24	49	39 (79.6)	31 (79.5)	840
Popliteal arterial supply	12	50	35 (70.0)	30 (85.7)	390
Ankle & foot arterial supply	36	51	30 (58.8)	25 (83.3)	990
Thigh venous return	12	55	25 (45.5)	22 (88.0)	282
Leg venous return	30	56	35 (62.5)	34 (97.1)	1,035
Mean	23	52	33 (63.3)	28 (86.7)	707
TOTAL	114				3,537

**Table 1.** Summary of viewing statistics for the five blood flow review stories shared on the course Snapchat account. By the time the fifth story was shared, 56 out of 68 (82%) students in the class were following the Snapchat account. Total views was calculated as the product of the number of snaps in a story and the mean of started and finished a story.

## Results, Satisfaction Survey

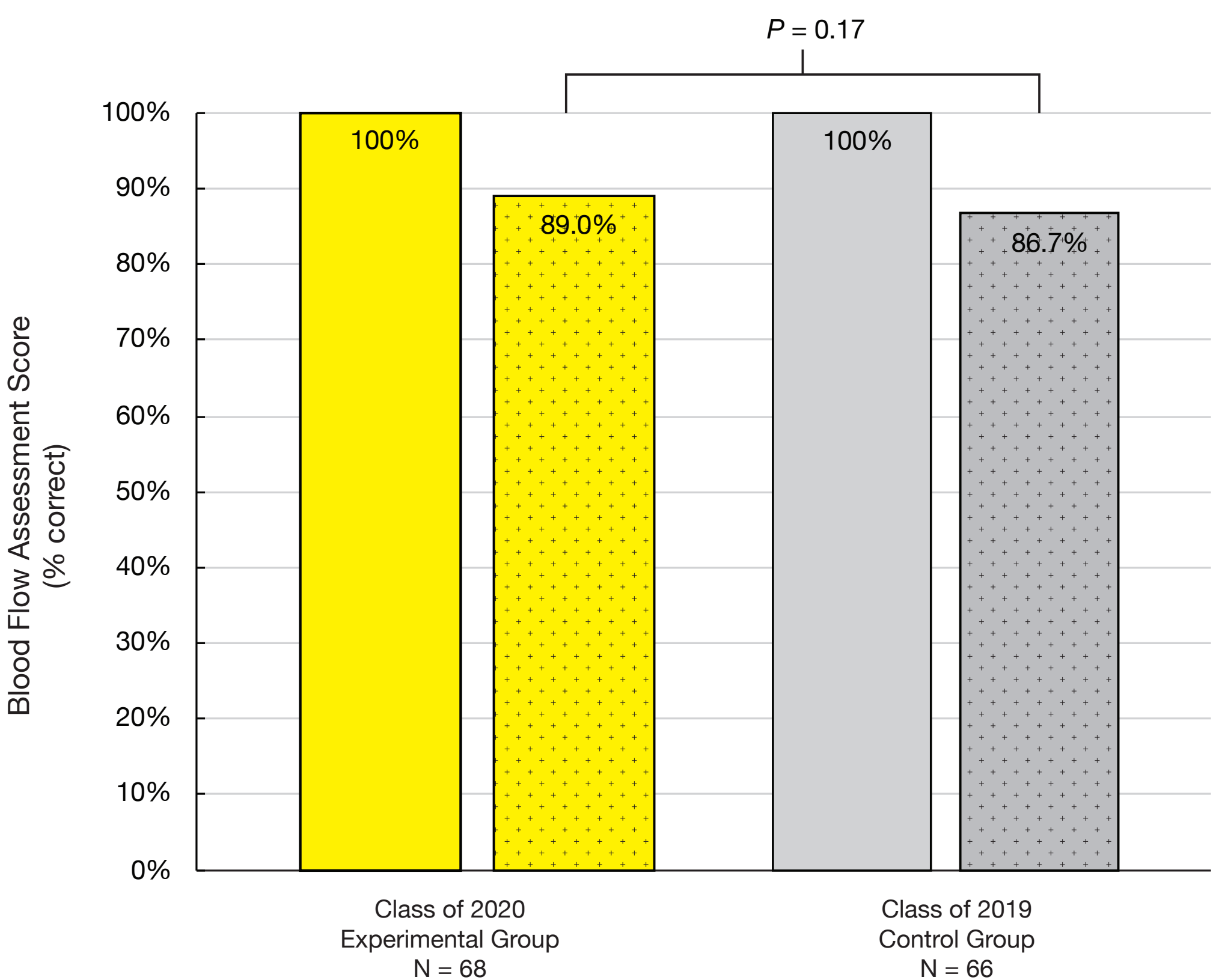
Statements rated by survey respondents	Median (range)	Likert 5 & 4 Ratings (%)
How accurate was the content presented in the Snapchat account?	5 (3-5)	96%
How familiar were you with the Snapchat platform prior to using it this summer?	5 (1-5)	75%
How interested are you in having more course content summarized using the anatomy Snapchat account?	4 (2-5)	75%
How confident did you feel in blood flow diagrams as a result of using the Snapchat account?	4 (1-5)	63%
How useful was the Snapchat account in reviewing blood flow diagrams?	4 (2-5)	59%
How helpful was the Snapchat account in preparing you for blood flow questions on the exams?	4 (1-5)	52%
How much did you learn from viewing the Snapchat account?	3 (1-5)	38%
How frequent was your discussion with classmates on a higher level as a result of using the Snapchat account?	3 (1-5)	27%

**Table 2.** Ratings of learner perceptions of the usability of the anatomy Snapchat account. For all statements a five-point Likert scale was used with 1 = Not at all..., and 5 = Extremely... This section of the survey was completed by all 56 followers of the account.

What are the strengths of the anatomy Snapchat account?	What are the strengths of the anatomy Snapchat account?
The quick review was helpful.	The quick review was helpful.
Another way to view the material.	Another way to view the material.
It's a different way to reinforce information- I'm usually flipping through snapchat while I'm procrastinating and when I see a course snapchat, I open it right away because it's a more modern and fun way to see the information.	It's a different way to reinforce information- I'm usually flipping through snapchat while I'm procrastinating and when I see a course snapchat, I open it right away because it's a more modern and fun way to see the information.
Keeps me studying when I'm distracted by my phone.	Keeps me studying when I'm distracted by my phone.
Good summaries and practice in a different context.	Good summaries and practice in a different context.
It's quick and to the point. Also, it was easy to access.	It's quick and to the point. Also, it was easy to access.
Fun! Easy to review anatomy content when I'm on the go (waiting for the bus and I don't want to take out all of my notes).	Fun! Easy to review anatomy content when I'm on the go (waiting for the bus and I don't want to take out all of my notes).
The Snapchat is a great review and a good way to get more exposure to content. Almost everyone uses Snapchat and frequently looks at it so it's easy to use and find time to learn more anatomy! Learning more about blood flow and anastomoses that occur helped prepare me for the blood flow with a blockage questions on the exam.	The Snapchat is a great review and a good way to get more exposure to content. Almost everyone uses Snapchat and frequently looks at it so it's easy to use and find time to learn more anatomy! Learning more about blood flow and anastomoses that occur helped prepare me for the blood flow with a blockage questions on the exam.
I loved the opportunity to easily view anatomy content and integrate it into otherwise "unproductive" minutes of the day.	I loved the opportunity to easily view anatomy content and integrate it into otherwise "unproductive" minutes of the day.

**Table 3.** Selected responses to the open-ended questions from survey respondents

## Results, Learner Assessment Outcomes



**Figure 3.** Blood flow assessment scores (% correct) on the unit exams were 100% for each group. Scores on the retention assessment dropped to a similar extent between groups as assessed by an independent samples t-test ( $P = 0.17$ ).

## Conclusions

These results demonstrated that an anatomy themed Snapchat account had a large following and was extensively viewed by learners. The user survey revealed learners were satisfied with the usefulness, accuracy, and ability of the account to prepare them for the assessment. There were no significant improvements observed in either short- or long-term assessment outcomes. This initial work showed that learners were receptive to reviewing anatomy concepts using Snapchat and there remains opportunity to determine how to optimize content delivery that results in significantly improved learning outcomes.

## References

1. Drake RL, McBride JM, Lachman N, Pawlina W. Medical education in the anatomical sciences: the winds of change continue to blow. *Anat Sci Educ.* **2009**; 2(6):253-9. doi: 10.1002/asc.117. PMID: 19890982.  
2. Bayer JB, Ellison NB, Schoenebeck SY, Falk EB. Sharing the small moments: ephemeral social interaction on Snapchat. *Inform, Comm & Soc.* **2016**; 19(7):956-977. doi: 0.1080/1369118X.2015.1084349

## Acknowledgements

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