




Medical student learning styles: does it really matter?

[Letter]

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Dear editor

We read with great interest the study by Khanal et al¹ regarding learning styles in medical school. Their findings that differences in learning styles do not influence academic performance are quite fascinating. This seems to be supported by previous studies^{2,3} which present a weak relationship between learning styles and academic achievement.

We value the work performed by Khanal et al¹. However, we believe there are a few factors that need to be considered. Firstly, the sample used in the study were first-year medical students. From our own experiences in medical school, we know it can take time to firmly establish and implement our own learning style after entering a new environment. This “lag-phase” is emphasised further when we consider the “dramatic increase in the volume of content”¹ that medical students experience in their first year of study. During these early stages, most medical students are “finding their feet”, and are likely to use study strategies that have been recommended by older students, as opposed to trusting in their own learning style. Thus, although the students have their own inherent learning style, whether they used this learning style to study for the first-unit anatomy exam is questionable. A study sample which is representative of students from more senior year groups may be more appropriate.

Secondly, only students who gave consent were enrolled in the study, which may introduce selection bias. We wonder if those who did not give consent tend to have a shared characteristic, such as having the read/write learning style, making the sample less representative of the population.

Additionally, although efforts were made to instruct students to answer based on what they would actually do in the scenario mentioned in each question, explaining the purpose of the study is likely to influence their answer selection. For example, the student may have a pre-conceived notion that visual learners have higher academic achievement. In this case, they may, subconsciously, be more inclined to select the answer corresponding to the visual learning style, when they would otherwise skip a question if they were unsure. However, we acknowledge that informing students of the study purpose is, ethically, important. In order to preserve this, whilst also safeguarding against potential answer bias, it may be more suitable to inform students of the study purpose after completion of the questionnaire.

Interestingly, learning styles are not fixed and may change over the course of a student's career.¹ This dynamic feature of learning styles cannot be observed by a cross-sectional study design, which was used in the study. It may be beneficial to

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perform a longitudinal cohort study, following students as they progress through their pre-clinical and clinical careers.⁴

Whilst the study suggests that learning style has little influence on academic performance in human anatomy, aligning teaching style to learning style may improve student satisfaction,⁵ which could subsequently increase course engagement and motivation, facilitating improved academic performance. Further studies which explore these factors are indicated.

Disclosure

The authors report no conflicts of interest in this communication.

References

1. Khanal L, Giri J, Shah S, Koirala S, Rimal J. Influence of learning-style preferences in academic performance in the subject of human anatomy: an institution-based study among preclinical medical students. *Adv Med Educ Pract*. 2019;10:343–355. doi:10.2147/AMEPS198878
2. Martinez EG, Tuesta R. Learning styles and gross anatomy assessment outcomes at a Colombian School of Medicine. *Educ Méd*. 2019;20(2):79–83. doi:10.1016/j.edumed.2017.12.012
3. Wilkinson T, Boohan M, Stevenson M. Does learning style influence academic performance in different forms of assessment? *J Anat*. 2014;224(3):304–308. doi:10.1111/joa.12126
4. ALQahtani DA, Al-Gahtani SM. Assessing learning styles of Saudi dental students using Kolb's Learning Style Inventory. *J Dent Educ*. 2014;78(6):927–933. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/24882779>. Accessed July 8, 2019.
5. Fitkov-Norris ED, Yeghiazarian A. Validation of VARK learning modalities questionnaire using Rasch analysis. *J Phys Conf Ser*. 2015;588:012048. doi:10.1088/1742-6596/588/1/012048

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