Students did not benefit from studying according to their supposed learning style

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The idea that we learn better when taught via our preferred modality or "learning style" – such as visually, orally, or by doing – is not supported by evidence. Nonetheless the concept remains hugely popular, no doubt in part because learning via our preferred style can lead us to feel like we've learned more, even though we haven't.

Some advocates of the learning styles approach argue that the reason for the lack of evidence to date is that students do so much of their learning outside of class. According to this view, psychologists have failed to find evidence for learning styles because they've focused too narrowly on whether it is beneficial to have congruence between teaching style and preferred learning style. Instead, they say psychologists should look for the beneficial effects of students studying outside of class in a manner that is consistent with their learning style.

For a new paper in Anatomical Sciences Education, a pair of researchers at Indiana University School of Medicine have conducted just such an investigation with hundreds of undergrads. Once again however the findings do not support the learning styles concept, reinforcing its reputation among mainstream psychologists as little more than a myth.

At the start of term, Polly Husmann and Valerie Dean O'Loughlin asked hundreds of undergrads on an anatomy course (which involved lectures and practical lab classes) to take one of the most popular online learning styles surveys, the VARK. Taken by millions of people worldwide, the VARK categorises students according to how much they prefer to learn visually, via auditory information, through reading and writing, or through kinaesthetics (by doing or by practical example).

The VARK website also offers study tips based on your supposed preferred learning style(s). The researchers encouraged their student participants to take the survey and to adopt the study practices consistent with their dominant learning style. Later in the term, the researchers surveyed them about the methods they'd actually used when studying outside of class, to see if they used methods in line with their supposed dominant learning style. Finally, the researchers accessed the students' end-of-year grades to see if there was any association between grade performance, dominant learning style, and/or studying outside of class in a way consistent with one's dominant learning style.

The results are bad news for advocates of the learning styles concept. Student grade performance was not correlated in any meaningful way with their dominant learning style or with any learning style(s) they scored highly on. Also, while most students (67 per cent) actually failed to study in a way consistent with their supposedly preferred learning style, those who did study in line with their dominant style did not achieve a better grade in their anatomy class than those who didn't.
Instead, there were specific study strategies, such as practising microscope work and using lecture notes, that were associated with better grade performance, regardless of students' learning style. Other activities, such as using flash cards, were associated with poorer performance, perhaps because they were a sign of learning by rote rather than deeper learning.

Husmann and O'Loughlin don't pull any punches in their conclusion. Their findings, they write – especially when considered in the context of past research – "provide strong evidence that instructors and students should not be promoting the concept of learning styles for studying and/or for teaching interventions. Thus, the adage of 'I can't learn subject X because I am a visual learner' should be put to rest once and for all."


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