The Myth of 'Learning Styles'

A popular theory that some people learn better visually or aurally keeps getting debunked.

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In the early '90s, a New Zealand man named Neil Fleming decided to sort through something that had puzzled him during his time monitoring classrooms as a school inspector. In the course of watching 9,000 different classes, he noticed that only some teachers were able to reach each and every one of their students. What were they doing differently?

Fleming zeroed in on how it is that people like to be presented information. For example, when asking for directions, do you prefer to be told where to go or to have a map sketched for you?

Today, 16 questions like this comprise the VARK questionnaire that Fleming developed to determine someone's "learning style." VARK, which stands for "Visual, Auditory, Reading, and Kinesthetic," sorts students into those who learn best visually, through aural or heard information, through reading, or through "kinesthetic" experiences. ("I learned much later that *vark* is Dutch for "pig," Fleming wrote later, "and I could not get a website called vark.com because a pet shop in Pennsylvania used it for selling aardvarks—earth pigs!")

He wasn't the first to suggest that people have different "learning styles"—past theories included the reading-less "VAK" and something involving "convergers" and "assimilators"—but VARK became one of the most prominent models out there.

Experts aren't sure how the concept spread, but it might have had something to do with the self-esteem movement of the late '80s and early '90s. Everyone was special—so everyone must have a special learning style, too. Teachers told students about it in grade school. "Teachers like to think that they can reach every student, even struggling students, just by tailoring their instruction to match each student's preferred learning format," said Central Michigan University's Abby Knoll, a PhD student who has studied learning styles. (Students, meanwhile, like to blame their scholastic failures on their teacher's failure to align their teaching style with their learning style.)

Either way, "by the time we get students at college," said Indiana University professor Polly Husmann, "they've already been told 'You're a visual learner.'" Or aural, or what have you.

The thing is, they're not. Or at least, a lot of evidence suggests that people aren't really one certain kind of learner or another. In a study published last month in the journal *Anatomical Sciences Education*, Husmann and her colleagues had hundreds of students take the VARK questionnaire to determine what kind of learner they supposedly were. The survey then gave them some study strategies that seem like they would correlate with that learning style. Husmann found that not only did students not study in ways that

seemed to reflect their learning style, those who did tailor their studying to suit their style didn't do any better on their tests.

Husmann thinks the students had fallen into certain study habits, which, once formed, were too hard to break. Students seemed to be interested in their learning styles, but not enough to actually change their studying behavior based on them. And even if they had, it wouldn't have mattered.

"I think as a purely reflective exercise, just to get you thinking about your study habits, [VARK] might have a benefit," Husmann said. "But the way we've been categorizing these learning styles doesn't seem to hold up."

Another study published last year in the *British Journal of Psychology* found that students who preferred learning visually thought they would remember pictures better, and those who preferred learning verbally thought they'd remember words better. But those preferences had no correlation to which they actually remembered better later on—words or pictures. Essentially, all the "learning style" meant, in this case, was that the subjects *liked* words or pictures better, not that words or pictures worked better for their memories.

In other words, "there's evidence that people do try to treat tasks in accordance with what they believe to be their learning style, but it doesn't help them," says Daniel Willingham, a psychologist at the University of Virginia. In 2015, he reviewed the literature on learning styles and concluded that "learning styles theories have not panned out."

That same year, a *Journal of Educational Psychology* paper found no relationship between the study subjects' learning-style preference (visual or auditory) and their performance on reading- or listening-comprehension tests. Instead, the visual learners performed best on all kinds of tests. Therefore, the authors concluded, teachers should stop trying to gear some lessons toward "auditory learners." "Educators may actually be doing a disservice to auditory learners by continually accommodating their auditory learning style," they wrote, "rather than focusing on strengthening their visual word skills."

In our conversation, Willingham brought up another study, published in 2009, in which people who said they liked to think visually or verbally really did try to think that way: Self-proclaimed visualizers tried to create an image, and self-proclaimed verbalizers tried to form words. But, there was a rub, he said: "If you're a visualizer and I give you pictures, you don't remember pictures any better than anyone who says they're verbalizer."

This doesn't mean everyone is equally good at every skill, of course. Really, Willingham says, people have different *abilities,* not styles. Some people read better than others; some people hear worse than others. But most of the tasks we encounter are only really suited to one type of learning. You can't visualize a perfect French accent, for example.

The VARK questionnaire itself illustrates this problem pretty well. One question, for example, asks:

> You are planning a vacation for a group. You want some feedback from them about the plan. You would:
>
> - describe some of the highlights they will experience.
> - use a map to show them the places.
> - give them a copy of the printed itinerary.
> - phone, text, or email them.

But of course, any friend-having human in 2018 would email their friends to coordinate group travel, whether or not that email includes the first three elements. (Another question asks, sweetly, "You are helping someone who wants to go to the airport" and suggests different ways of giving directions, along with the option to simply "go with her." It depends on the "her" in question, one would assume!)

The "learning styles" idea has snowballed—as late as 2014, more than 90 percent of teachers in various countries believed it. The concept is intuitively appealing, promising to reveal secret brain processes with just a few questions. Strangely, most research on learning styles starts out with a positive portrayal of the theory—before showing it doesn't work.

Willingham goes so far as to say people should stop thinking of themselves as visual, verbal, or some other kind of learner. "It's not like anything terrible is going to happen to you [if you do buy into learning styles]," he says, but there's not any benefit to it, either. "Everyone is able to think in words, everyone is able to think in mental images. It's much better to think of everyone having a toolbox of ways to think, and think to yourself, which tool is best?"

Husmann says the most important thing, for anyone looking to learn something new, is just to really focus on the material—that's what the most successful students from her study did. Rather than, say, plopping some flashcards in your lap … "but I'm really watching the football game," she said.

Fleming did not return a request for comment by press time, but his own papers seem to warn against getting too carried away by VARK. "I sometimes believe that students and teachers invest more belief in VARK than it warrants," he wrote in 2006. "You can like something, but be good at it or not good at it … VARK tells you about how you like to communicate. It tells you nothing about the quality of that communication."

In other words, it might help you learn about yourself, but it might not help you learn.

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