

The Case Against Learning Styles: “*There is no evidence...*”

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Warning: This article is biased as it has been written by the designer of VARK. VARK is a questionnaire used to indicate people’s preferences for taking-in and presenting information - Communication.

The most damning criticism, about learning styles comes from researchers in the academic world. Not much comes from those who use learning styles as part of their strategies for learning, training and teaching. It is usually stated in these terms; “*There is no evidence that knowledge of one’s learning styles is a benefit to learning.*” The absence of evidence is seen as the main issue. But Donald Rumsfeld infamous search for weapons of mass destruction elicited this response; “*Absence of evidence is not the same as evidence of absence*”.

Absence of Evidence is not Evidence of Absence

Using the statement in the heading above this could be rephrased as, “*the absence of evidence about the benefits from knowing one’s learning style does not mean that benefits don’t exist.*” There are many aspects of everyday life where there is a lack of evidence. There is not much evidence that the sun will rise tomorrow or that cellphones benefit communication or that there are parallel universes. But lack of evidence means what it says – *at this point in time, we do not have any reliable, valid research that would predict that knowing one’s learning style is beneficial for learning.* That statement does not mean that learning styles are not beneficial and there may be good reasons why that evidence is missing.

What is Learning

Part of the gap in the evidence for, or against, learning styles is the lack of a definition for *learning*. Without that component much of the argument for and against is merely an interesting argument with different points of view, neither right nor wrong. Learning happens when there is a substantial and lasting change in thinking, often, but not necessarily, linked to behavior change. While we may recognize that we have learned something, it is difficult to provide evidence as to when or how it occurred.

Furthermore, there are rather flimsy proxies used for measuring learning. Measuring the leap from a state of, “*not knowing*” to “*knowing something*” is seldom possible. Using test scores or similar assessment instruments is, so far, our best attempt but few would justify *learning* as being evidenced by a test score moving from Grade B to Grade A or from 70% to 75%.

We also have some difficulty in knowing when learning occurs or, to what it can be attributed. Learning that over-exposure to sunlight can increase the risk of cancerous melanoma may be a lengthy process for an individual as she moves from *unknowing* to *knowing* and there may be no single clinching event that cements that as being “*learned.*” The learner (who should know best) is often unable to untangle where that learning about sunshine and melanoma came from or the moment when it occurred.

Advances in neuroscience will move closer to an explanation of the whole process of learning but the electrochemical firing between synapses within the brain is not yet sufficient to help us with a measure of learning. *Learning*, like a nervous breakdown, is widely recognized and poorly understood but seldom accurately measured.

The critics of learning styles are unwilling to take into consideration any expressions of benefit that come from the biased sources – the learners. So self-reports of improvements in their learning are not acceptable as “*evidence*” because they may be merely placebos or self-justification. Also, learners are sometimes willing to credit any improvements in their understanding to their own efforts rather than to external factors. Any support for learning styles from the very large numbers of learners is also discounted on these same grounds, “*there is no evidence*” or, “*there is no evidence that meets the high standards of academic, scientific research*” or “*show me the double-blind, objective and controlled experiment that were used to get these results.*”

So what do we know?

If we cannot define *learning* succinctly or agree on when and how it occurred, it is going to be very difficult for proponents of learning styles to ever argue with the, “*there is no evidence*” critics. Weight of numbers will not suffice. Self-reports will be discounted and we will have to wait for ...

But waiting can be bad for you. Knowing one’s learning style, like GOOGLE’s motto, “*Do no harm,*” may be helpful for millions of learners so should we shut it down because of the *no-evidence* argument. Could we examine some alternative and logical standpoints using other propositions? The switch in the following paragraphs from *learning styles* to *learning preferences* is intentional. A style embodies many preferences some of which can be usefully understood by students’ self-examination and reflection.

- a) There is no evidence from double-blind, controlled experiments that knowing one’s learning style harms learning. That there is no evidence to support finding out about your learning does not mean that such an action is harmful to your learning. That is *non sequitur*. If the jury is still out, should we just wait when, it may be, that proceeding will do no harm?
- b) Knowledge of one’s learning style, while it is not a sufficient reason for improved learning is a necessary precursor to understanding something about how one learns. It at least opens up a conversation entitled “*How do I learn?*” which can hardly be described as dangerous, or subversive or even unhelpful. Just as *weighing the hog does not make it fat*, knowing one’s learning style may not be sufficient to evidence improved learning but it is a necessary step towards understanding “*my learning*”.
- c) Using learning style elements that are not aligned with one’s preferences is unlikely to help learners. It is more likely to hinder that process. For example, Mary has thought about how she learns and has used some learning style instrument that indicates that she learns best in quiet surroundings late in the evening. Her friend, Susan, chooses to learn early in the morning before breakfast and with her iPod in her ears. Mary decides that, as Susan is achieving excellent scores in all her tests, she should wake up early, use her iPod, forego breakfast and set up a learning schedule. Would you ever recommend that to Mary? – even if there is no evidence that noise levels and time of day have no affect on learning?
- d) Of course knowing one’s learning style does not improve learning; it is what one does after learning about your preferred learning that will determine a positive or negative outcome. Had Mary listened to her own voices she may have avoided following Susan’s preferences. Adopting learning behaviours that are aligned with your preferences is more likely to lead to positive learning outcomes than adopting alternative strategies that are the opposite of your preferences.
- e) Some critics use the development argument which states that we should be on a curve of improved learning through development in areas that are not our strengths. They suggest that it is healthy for us to explore learning in modes that we do not prefer. We would

probably agree if it were not for the need to use our learning effectively in our life. Would forcing children to eat broccoli lead to improved health?

In one example of the attack on learning styles, Coffield *et al* in a UK higher education report¹ on learning style instruments wrote extensively about the “*lack of evidence*.” It became the major finding of their report, which incidentally never addressed or provided a definition of *learning*. Coffield in his conclusion seemed more interested in trying to save UK educational expenditure on learning style instruments by discrediting them with the “*no evidence*” claim, than examining what they could or could not do. In a time when the UK government (and Coffield et al) was concerned about retention in higher education, anything that saved valuable money that could be useful for the retention of students was a desirable outcome and money spent by universities and colleges on learning styles instruments provided an easy target.

Much of the debate about learning styles avoids discussion about any impact on teaching and learning, or teachers and students. The reason for that is not known, but it may have something to do with the distance between theory and practice in academia. There is also the subversive possibility that knowing one’s learning style may empower students to ask questions of their teachers such as requests for more variety in the teaching that might more effectively meet the students’ needs.

Some critics believe that their discipline has decreed the ways in which their subject or course should be taught and that they are following that script so learners’ viewpoints are irrelevant. Or they maintain that trying to teach everybody differently is nonsense – which it is. The argument for learning styles has never posited that everybody needs to have his/her learning peculiarities catered for. Some learners can cope with translating what is provided by their teacher into something that is useful for them- they don’t have to be spoon-fed. Others may need more help and a little more variety. Teaching in different ways might even advantage some students who previously were disadvantaged, There is an excellent example of this in Sternberg’s book² where he states that having taught statistical methods using mainly algebraic methods, he discovered a text that used geometry to the same ends. He changed his teaching to understand what might happen and found that another group of students succeeded – a group characterized previously by failure. That is a not evidence for students’ learning about how they learn, but he provides a cogent argument to support the widespread use by students of helpful advice about how they prefer to learn and different approaches to meet the same ends.

¹ *Learning styles and pedagogy in post-16 learning: A systematic and critical review*, Frank Coffield, Institute of Education. University of London; David Moseley, University of Newcastle; Elaine Hall, University of Newcastle; Kathryn Ecclestone, University of Exeter; published by the Learning and Skills Research Centre, www.LSRC.ac.uk 2004.

² Sternberg R.J.(1997) *Thinking Styles*; Cambridge University Press, Cambridge. pp 16-17.