

Facts, Fallacies and Myths: VARK and Learning Preferences

Neil D Fleming
Designer of the VARK questionnaire
December 2012

This article became necessary because of the wide-ranging errors about VARK and its resources. Other material is on the website: www.vark-learn.com

Learning Style or Learning Preferences?

Technically VARK is not a learning style. A learning style would indicate preferences for a wide range of learning behaviours such as preferences for learning at a particular time of day, or in a particular temperature or lighting as well as structural options such as learning with others or with adults or peers or alone or in mixed groups. VARK is about people and their learning and it focuses on modalities that they might prefer when learning. The questions are framed with an emphasis on learning (and not teaching or relaxing).

Diagnostic or Indicative

VARK results are indicative not diagnostic. With only 16 questions it would be unlikely that a diagnosis for any aspect of learning could be made. So why only 16 questions? Firstly, the responses of learners are most likely to be valid when they are willing participants in a short survey session. Their responses and their fatigue levels are likely to be adversely affected by surveys of more than 30 questions. Secondly, it is very difficult to design questions that have four reasonably balanced options that will attract those with a particular modality preference.

Multimodality

Life is multimodal so it is unlikely that any population with VARK data will exhibit more than 40% as having a single preference. And, a single preference is indicative of the strength of one of the modalities not an indication that the other three VARK modalities do not exist. Even a learner with a very strong Kinesthetic preference will still have scores for the other three modes and be prepared to use those when they suit the context of their learning.

Skill or Preference

It is possible to like something (*preference*) and not be good at it (*skill* or *ability*). Similarly it is possible to be very skilled at using strategies aligned with one of the VARK modalities but not use that for learning. As an example, a learner who was very skilled at freehand drawing did not use it for her learning and did not enjoy doing it.

Uni-modality in Action and Behaviour

One research study that used VARK, tried to limit the learning approaches to each of the VARK modalities and compare the differences. To take an extreme example, one could try to teach somebody to ride a horse using Aural strategies only and then teach another person using Read/write strategies only as an error-ridden research project. That is a waste of valuable research time, and effort. Although it is possible to provide separate and identifiable scores for the four VARK modalities they are very "*blurred at the edges*" and they exist together for good reasons. For example, many researchers don't realize that it is possible to ask learners to write (Read/write) a Kinesthetic essay merely by changing the topic of the essay. A learner who is asked to write about experiences that he or she has had, is writing from a *real* or a *concrete* and factual basis. That is very much within the strategies that those with a Kinesthetic preference employ. Similarly asking a learner to write the dialogue for a conversational exchange between two antagonistic participants is likely to appeal to those with an Aural preference. One might expect that learning music would suit a learner who has some strong Aural preferences but music can be very effectively learned by those who employ Read/write, Visual, or Kinesthetic strategies, or all-four. Effective teachers know about these differences and they use them to attract different learners to assigned tasks.

Pictures are Visual.

This is a common mistake. Pictures that represent something may be Visual using the definitions in VARK, but pictures that are “*real*” such as photographs and videos of events and demonstrations are more likely to be appreciated and used by those who have a Kinesthetic preference. Part of the confusion occurs because some people focus on the medium that is used rather than what it contains. Use of a screen, whether on a computer, or in a theatre or elsewhere, does not mean that the material on it is Visual. A screen showing alternative house designs and plans is more likely to appeal to a potential buyer with a Visual preference. A similar screen showing the finished house set in attractive grounds (or a tour through a built example) is more likely to enthuse a person with a Kinesthetic preference. It is the *message* not the *medium* that is important for VARK.

Kinesthetic

This mode is a source of confusion for some and the VARK definition, not the dictionary one, needs to be used if one is to understand learners who prefer this modality. While *learning by doing* is oft-quoted, it is slow and often inappropriate to use for effective learning. Certainly in the early years of child development, it is the most-used modality but in post-high-school education, Kinesthetic needs to be redefined. It is best observed in its VARK form in the learning strategies employed by elite sports players - biased towards Kinesthetic preferences. For them it is the reality of the game or the contest that provides most learning. Second, would be the demonstration of skills from a coach or mentor. Third most helpful, would be the opportunity to watch oneself in action (video replay). So is video not suited to a Visual strategy? Seldom! If it is used to show the reality of an experience it is more helpful for those learners with a Kinesthetic (VARK) preference. As one learner said “*I never understood how to prune commercial grape vines for wine production by listening to the professor in the theory lectures. It was not until I watched as he demonstrated with secateurs in the vineyard, that I understood the theory **and** the practice.*”

Where does Read/write come from?

The very old distinctions that used the three-part VAK modalities appears to have no known designer and is likely to be based on Greek or Egyptian knowledge of sensory modalities. I was convinced that there was a fourth learning modality and introduced Read/write for learning strategies based on preferring text. This meant separating Read/write from within the Visual modality where it was previously placed. And it left the Visual modality with *symbolic representations of information* as found in graphs, charts, maps, logos, and diagrams.

Scoring VARK

A more comprehensive article on the difference between the research scoring algorithm and the one employed on the website is listed on our website. It seems likely that we will move towards using the research algorithm that uses standard deviations to define single preferences and multimodality and as you read this that may have already happened.

Translations

There are over 20 translations of VARK. However, caution is advised as some translations are only in older versions of VARK and have not been updated. The wording of the VARK questionnaire is changed quite often to reflect different technological and behavioural changes so some older translations are likely to be accurate but dated. We welcome updates and new translations.

Nature or Nurture

For preferences in general, there is little research evidence for nature or nurture explanations, and much would depend on the preference that is being discussed. VARK preferences are probably formed during the first 12-20 years of life and will be modified or built from all those learning experiences and contexts that family, teachers, colleagues, peers, and caregivers provide for each individual.

Do scores change?

We have preferences that are strong or weak for many things in our lives and they may or may not be subject to rapid change. Some are relatively fixed; our preferences for a particular political party, or food, or partners are not prone to rapid change and learning preferences would be in that group. If an individual

chooses to complete the VARK questionnaire at different times his/her scores may shift up or down a few points but it is unlikely that their overall preferences will change markedly. If you were described as having a strong Read/write preference it is unlikely that in the medium term you will switch to having a strong Aural preference. If you wanted to change a preference in a major way it would need some long term and substantial exposure in an environment where that alternative mode was strongly represented. For example, to alter one's preference for learning that used Visual strategies one could spend considerable time in an architect's office or a realtor or designer's studio or similar environments where Visual strategies are often used. We still await a definitive reliability study.

VARK will tell me how I Teach.

VARK was designed with, and for, students. The development of VARK came from observations and interviews with students. The questions are about responses to learning and therefore the questionnaire is not a reliable indicator of how people teach. The way that teachers teach, and the strategies they use, may be quite similar or quite different from the ones they employ when they are learning. When teachers complete the VARK questionnaire it indicates how they learn, not how they teach.

Multimodal is ill-defined.

Please see the article on our website about Multimodal learners.

Research

The four VARK scores for an individual or their percentages from a group are the first level of data and researchers seldom use it. As researchers move further away from this data they move into VARK categories that are calculated (constructed) using subjective algorithms (*Research* or *Online*). One of the more useful tools that avoid the various VARK categories is to combine all those who have some of a preference. For example, this would aggregate those who have a single preference for, say Visual, with those who have Visual as part of their bimodal or trimodal profile (VA, VR, VK, VAR, VAK, VRK). Double and triple counting is involved but it does result in a four-part distinction based on V, A, R and K. And it is a meaningful statistic as it indicates *all those who have some preference for learning* in each of the four modes.

One Mode is Best

Because learners have different preferences between the four modes it is unlikely that any particular mode will be dominant. That is why multimodality is the most common profile for two-thirds of learners. Trying to isolate a behavior and assign it to just one mode is a waste of time. Texting on a cellphone may seem like a Read/write-only use but there may be other modes in play. If the language of the text is in "chat mode" and uses abbreviations and colloquial language it will be an indication of the Aural mode and if it contains real-life experiences and examples it will appeal to those with a Kinesthetic preference. It is possible for people to speak (Aural) Kinesthetically because of the content of their language and also for them to speak visually (Visual) or in a Read/write mode. Researchers need to work with this multimodality rather than attempting to measure whether any single mode is "matched" to learners' modes.

Matching Teaching to Learning is Effective

Some of the strongest attacks on the use of learning styles in teaching are justified. No teacher can usefully employ strategies that will *match* all the learning preferences exhibited in a class whether online or face-to-face. Some learners will tune-out no matter what is offered. If there were a set of effective and defined teaching strategies, teacher education would now be streamlined and using a single and universal curriculum. (If we extend the analogy; restaurants would all have the same menu.) What VARK offers is student-based, not teacher-based. Matching is not the aim. Instead, learners, through the questionnaire, are provided with an indication of the modes they would prefer and they are advised to choose strategies aligned with those preferences for making notes, taking notes, designing study strategies and preparing for tests, assignments, projects, reports and examinations. While it may be helpful to imagine a time when learners could explore strategies aligned with their weakest and least-used VARK mode(s) that is unlikely to occur when they face formal, and often stressful, opportunities to gather qualifications.