

# Learning Styles Again: VARKing up the right tree!

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## Introduction

This article was developed in conversations (face to face and via email) between David Baume PhD FSEDA, higher Education Consultant, and Neil Fleming, the designer of the VARK questionnaire and helpsheets.

## Understanding how we learn

Students and teachers need a starting place for thinking about, and understanding, how they learn. Self-knowledge is a good start. How to get that self-knowledge? Inventories can be useful. Initially, it doesn't much matter which inventory we use. Why not? Because a learning style is not a set of scores on some inventory, or a set of alphabetic symbols, or paragraphs of descriptors with labels. A learning style is, rather, a description of a process, or of preferences. Any inventory that encourages a learner to think about the way that he or she learns is a useful step towards understanding, and hence improving, learning.

VARK above all is designed to be a starting place for a conversation among teachers and learners about learning. It can also be a catalyst for staff development - thinking about strategies for teaching different groups of learners can lead to more, and appropriate, variety of learning and teaching.

One proviso should be made about the VARK inventory. It is, technically, not a learning styles questionnaire, as it provides feedback only on one's preferred modes for communicating. These 'modal preferences for learning' are only a small part of what most theorists would include in a complete package deserving to be called a 'learning style'.

Some learners already know a lot about the way they learn, and need no help from any inventory or questionnaire. For others, doing the VARK questionnaire again and again over time is a worthwhile exercise, even though - maybe because - the scores may vary. VARK works when people find it useful.

## The origins of VARK

For nine years I was one of Her Majesty's school inspectors in the New Zealand education system. During this time I watched some 9000 classes. I was puzzled when I observed excellent teachers who did not reach some learners, and poor teachers who did.

When I moved to Lincoln University to work in staff development, I decided to try to solve this puzzle. There are, of course, many reasons for what I observed. But one topic that seemed to hold some magic, some explanatory power, was preferred modes of learning, 'modal preferences'. Some parts of a learning preference are comparatively difficult for an individual to change, or for an education system to respond to - for example, preferred time of day to study, or preferred time for food

intake, or motivation. But attention to preferred learning modes allows flexibility for students and teachers to modify their behaviour, if not their preference.

It seems to me that our preferences are part of who we are. They inform how we approach things. We often have quite strong preferences for such things as cars, colours, food and partners. So why not look into our preferences for the ways in which we learn?

The main ideas and sources that informed VARK were my prior experiences and observations, and working with students and teachers at Lincoln University who provided my laboratory and practicum.

My main current ideas about preferred learning modes include:

- modal preferences influence individuals' behaviours, including learning
- modal preferences are not fixed, but they are stable in the medium term
- both students and teachers can reliably identify and provide examples of their use of modality preferences in learning
- preferences can be matched with strategies for learning. There are learning strategies that are better aligned to some modes than others. Using your weakest preferences for learning is not helpful; nor is using other students' preferences
- information that is accessed using strategies that are aligned with a student's modality preferences is more likely to be understood and be motivating
- the use of learning strategies that are aligned with a modality preferences is also likely to lead to persistence learning tasks, a deeper approach to learning, active and effective metacognition
- knowledge of, and acting on, one's modal preferences is an important condition for improving one's learning.

I could produce a similar list for teachers' modality preferences and their influence on students' learning. But I am not a theorist.

## The development of VARK - and the name

I noticed that, in response to a question such as 'How do I get to..?', people gave directions in different ways. I wondered if different people prefer to be told how to get there in different ways - being shown a printed map, having a map sketched for them, being told, being given written instructions, being physically taken there. So I began with a question about this.

Other questions came from my work with students. I

tested these questions on students whose preferences I knew from discussions and from examples of their note-taking and learning patterns.

After a couple of years I had 13 questions. I called the questionnaire VARK. It could have been KRAV or VRAK. I learned much later that VARK is Dutch for pig, and I **could** not get a website called vark.com because a pet shop in Pennsylvania used it for selling aardvarks - earth pigs!

VARK is an acronym for Visual, Aural, Read/write and Kinesthetic. VAK inventories had been around for years. What was new in my work was a second 'visual' modality for Read/write learners. From what I read and observed, it seemed obvious that some students had a distinct preference for the written word whilst others preferred symbolic information as in maps, diagrams, and charts. These two preferences were not always found in the same person. There is more acceptance of this distinction today than in the 1980s.

### Using VARK

Users complete the questionnaire online or on paper. They can have more than one answer per question, so they get a profile of four scores - one for each modality. That begins a process of thinking about how they prefer to learn. VARK is a catalyst for metacognition, not a diagnostic or a measure. The questionnaire is deliberately kept short (13 questions -maybe 16 in the new version) in order to prevent student survey fatigue. It also tries to encourage respondents to reflect and answer from within their experience, rather than from hypothetical situations.

Over 180,000 people have used VARK online from mid-March to mid-September 2006. Those who answer some demographic questions make up the group called 'With Data'; the others we call 'Visitors'. There is a big jump in use after the holidays when the UK and the USA go back to school. Figures will decline slowly from the August high through to next February.

Table 7; Visits and Completions

	With Data	Visitors	Visitors Per Day	Visitors Per Week
2006				
March*	3813	13,523	781	5467
April	4823	17,178	573	4008
May	5320	20,231	653	4568
June	9850	20,509	684	4785
July	7396	15,583	503	3519
August	16,827	49,502	1597	11,178
Totals	48,029	136,526		

\* Only the last 17 days of March are recorded here.

Table 2; Regions and VARK Visitors (15<sup>th</sup> March to 11<sup>th</sup> September 2006)

	Asia	Canada	Europe	Oceania	South America	UK	USA
	3%	2%	2%	6%	1%	9%	77%

Interestingly, twice as many women as men use VARK and supply data about themselves. Also, of course, the

ratio of students to teachers is high - about 6:1. We know that just under 8% are completing the questionnaire for a second (or third or...) time.

When users get their results online, we ask if they think their results are a match to their own perceptions, or don't match or they don't know. Those figures run at 58%, 37% and 5%. I know self-perceptions don't rate highly in research, but I would be worried if those figures were in any other order.

I spend a lot of time answering emails; I enjoy that, and get ideas from what others contribute.

### Using VARK for what?

I know, from the daily stream of emails from people asking for permission to use the copyright VARK materials, that it is heavily used. (It is free for use in schools and universities.) I wish I knew more about the uses people make of it. I have a file full of examples and testimonials - and a few criticisms, too. Here are three examples of positive feedback:

- One teacher in the USA has been investigating the notion that maybe those students who are multimodal -that is, they prefer to use several modes to fully understand something - are missing out the most in our education systems. This teacher has tracked many of the students who are asking for help at her learning centre.

A disproportionate number of these are multimodal, with scores such as 11, 10, 9, 7. Her theory is they don't get enough variety in their intake of information to confirm or settle it as new learning. Modal impoverishment?

- A French professor revamped his philosophy teaching and assessment so that it allowed for 'visual' expressions of learning, and found that a different set of students excelled
- Some students take their VARK scores to the teacher and say, 'Can you help me by teaching this way...?'

I find all this fascinating. Much education is probably mono-or at the most bi-modal. Teaching often reflects the teacher's preferred teaching style rather than students' preferred learning styles. Managed or Virtual Learning Environments may not change that as much as we hope - they sometimes implement old teaching styles in new technology, although with a shift from speech to text (A to R!).

Various students are doing research on VARK; teachers have given papers on it and made conference posters. Some UK universities have placed the VARK software on their intranets, but I don't hear much from them. I run workshops on VARK and how to use it effectively, most recently in the UK and USA, and these result in a lot of enthusiasm for VARK.

The helpsheets may be the most useful part of the package. There is no shortage of learning style inventories available. What made VARK different when it was launched in 1987 was that it came with helpsheets rather than labels. Now students can get some help with the question, 'OK. I know what I am, but what do I do about it? How can I use knowledge about my learning preferences to help me to learn?'

## Some reservations and cautions about VARK

Learning styles have had a bad press. It seems that they are lauded and then attacked on an almost cyclical basis. This is probably because it is very difficult to measure learning (in part because it is difficult to define learning in useful ways), especially if one wants to know when learning happens or to what it can be ascribed.

The critics of learning styles say things like: 'Knowing one's learning style does not improve learning.' That is just as true as that knowing one's weight does not help weight loss. However, knowing one's learning style can be beneficial if learners take the next step, and consider how and when they learn, as part of a reflective, metacognitive process, with action to follow. You don't fully understand how you learn with a learning style inventory alone. What happens afterwards has the potential to make a difference. Just as what you do after you find out that you are overweight makes a difference to your weight.

Dr Marilla Svinicki, Professor and Area Chair, Department of Educational Psychology (Area: Learning, Cognition and Instruction) at the University of Texas at Austin, tested VARK, and wrote:

*'We found that (VARK) was hard to validate statistically, including with several modifications we tried and several statistical strategies such as multidimensional scaling. We just couldn't get a good fit with the data.'*

*This does not mean that the instrument itself is not valid or desirable, but it shouldn't be used in research; that is not its strength. Its strength lies in its educational value for helping people think about their learning in multiple ways and giving them options they might not have considered. The statistical properties are not stable enough to satisfy the requirements of research, but then, one of our findings is that no one has been able to design an instrument along these lines that does. So VARK is in good company.*

*Everyone who uses the VARK loves it, and that's a great thing to be able to say. So it is obviously striking a chord with almost everyone who uses it. We just have to recognize that the constructs of learning style are too varied to pin down accurately and every instrument I've ever considered suffers from this same issue.'*

I sometimes believe that students and teachers invest more belief in VARK than it warrants. It is a beginning of a dialogue, not a measure of personality. It should be used strictly for learning, not for recreation or leisure.

Some also confuse preferences with ability or strengths. You can like something, but be good at it or not good at it or any

Point between. VARK tells you about how you like to communicate. It tells you nothing about the quality of that communication.

It is a pity that technology does not easily allow us to have the questionnaire in Visual, Aural and Kinesthetic modes.

## Further developments with VARK

- We are in the middle of a five-yearly review of the questionnaire. We have modified some questions, removed some and added some. We are using the

strong visitor numbers in autumn 2006 to test these so that we know who is choosing each option and who is not

- We have a new subscription service where no software needs to be installed on your intranet. We store the numbers for you and give you access to your classes' results
- Using people's VARK scores, I am writing profiles about learning for individual teachers and students
- We are keen to add translations of VARK beyond the 14 languages we have at present
- I am starting to use learning preferences for sports, using VARK to help coaches, players and athletes. This work is mainly in elite professional sports, but VARK can also help amateur coaches and indeed parent coaches
- I still enjoy visiting the UK and the USA to run participatory workshops and development sessions on VARK (and other topics).

## My own VARK score, and comments thereon

My last score was V=7, A=1, R=4 and K=3. My MA (Hons) in Geography fits with my strong preference for diagrams, charts, maps and visual symbols used in many situations. (My children, when they wanted help with their homework, would say, 'Dad can we have the short version please and without any diagrams'.) My R score indicates that I have some preference for Read/write input and output - this is evidenced in my publications and writing style. Embodied in that K score is a good dose of practical 'just do it' preference. I pay little heed to Auditory input - at least, according to my family!

These scores are a good place to begin a conversation about how I learn.

## Acknowledgements

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References The VARK website at [www.vark-learn.com](http://www.vark-learn.com) has a useful bibliography.

Fleming, N. D. and Mills, C. E. (1992) 'Not Another Inventory, Rather a Catalyst for Reflection', *To Improve the Academy*, Vol. 11, p. 137.

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