

Introduction

Fundamental to every coach is the ability to understand the depth of how we learn.

This paper is written to prepare you on your upcoming workshop. You will be asked to share extensively your learning from this paper, and any additional research you may have made.

How people learn

The process of learning is complex and hotly debated. To put context to this consider a review in 2004 by the LSRC (Learning and Skills Research Centre) which found 3800 references to learning stylesⁱ.

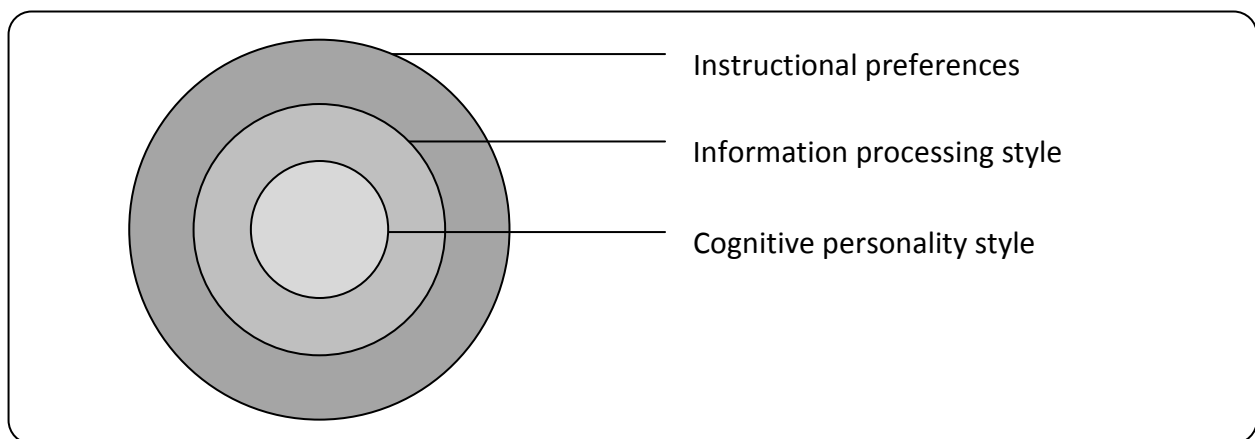
In addition to this the CIPD provided a fact sheet in August 2005 which summarised 13 models on learning stylesⁱⁱ.

What does the research say?

A number of models support us as coaches to adapt our approach to a range of styles out there.

Firstly let us start at a high level and explain the categories that learning styles fit to, according to the research.

In 1983 Curry's 'onion' modelⁱⁱⁱ was introduced as a pragmatic way to show the broad categories of the learning styles models.



'In Curry's model, the inner layer of cognitive personality style is both more stable (and therefore less easily modified or changed) and more significant in complex learning, while the outer layer of instructional preferences is easier to modify and influence, but less important in learning. Many researchers in the learning styles field have seen Curry's model as a useful, pragmatic way to present different models within these broad categories'ⁱ

Five models to consider

In identifying training and learning solutions, one size will not fit all. Consideration should be given to a 'matrix of learning styles'. In practical and real terms training professionals and coaches meet many of the criteria detailed in all 13 models in the CIPD and LRSC papers.

However this is often by default rather than design. The more familiar models are often quoted, overused and meaning that some of the latest thinking in this fields goes unused, in a conscious way at least.

Dunn and Dunn

According to the Dunn and Dunn model, 'learning style is divided into 5 major strands called *stimuli*. The stimulus strands are:

- a) environmental,
- b) emotional,
- c) sociological,
- d) psychological, and
- e) physiological elements,

that significantly influence how many individuals learn' ^{iv}

The diagram below shows the considerations under each strand.

Stimuli

Environmental	Sound	Light	Temperature	Seating/Layout		
Emotional	Motivation	Responsibility (Conformity)	Task preference	Structure		
Sociological	Self	Pairs	Peers	Team	Adult	Variety
Physiological	Perceptual	Intake	Time of day	Mobility		
Psychological	Analytical	Global	Reflective	Impulsive		

Source: Dr R Dunn & Dr K Dunn

Stroot et al state that 'Dunn and Dunn learning styles models assume that adult learners vary in the aforementioned areas. For example, some learners are highly motivated and prefer a learning environment that is dimly lit with little distractions. Conversely, a learner who is marginally motivated might prefer a learning environment that is visually stimulating with an instructor who relies on a collaborative method utilizing peers to teach (e.g. classroom discussion, experiential activities)' ^v

Kolb

One of the most influential and commonly known models was developed by David Kolb.

'Kolb's model works on two levels - a four-stage cycle:

1. Concrete Experience - (CE)
2. Reflective Observation - (RO)
3. Abstract Conceptualization - (AC)
4. Active Experimentation - (AE)

and a four-type definition of learning styles, (each representing the combination of two preferred styles, rather like a two-by-two matrix of the four-stage cycle styles, as illustrated below), for which Kolb used the terms:

1. Diverging (CE/RO)
2. Assimilating (AC/RO)
3. Converging (AC/AE)
4. Accommodating (CE/AE)^{vi}

Detail on the styles are provided by Stroot et al' ^v

'Divergers

The diverger acquires knowledge through intuition. Individuals with this preferred style of learning draw upon their imaginative aptitude and their ability to view complex situations from many perspectives. Divergers also possess the ability to effectively integrate information into meaningful wholes. However, the diverger's imaginative ability is his or her greatest strength.

Convergers

The converger acquires knowledge by thinking/analysing and then practically applying the new ideas and/or concepts. The ability to practically apply ideas is this learner's greatest strength. Convergers organize information through hypothetical deductive reasoning. The emphasis for convergers is to think rationally and concretely while remaining relatively unemotional.

Assimilators

The ability to create theoretical models and reason inductively is the assimilator's greatest strength. Assimilators learn by thinking and analyzing and then planning and reflecting. Assimilators do not emphasize practical application; rather they focus on the development of theories, often discarding facts if they do not fit the theory.

Accomodators

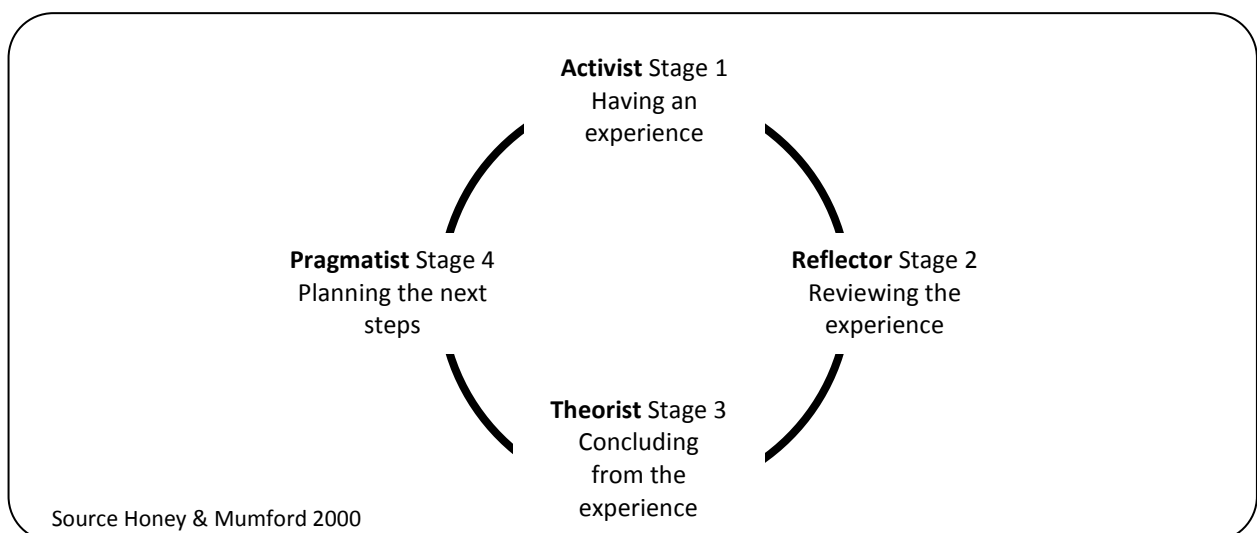
Unlike the assimilators, accommodators will discard the theory if the facts do not fit. Accommodators excel in situations where they must apply theories to specific circumstances. Their greatest strength is their ability for getting things done and becoming fully involved in new experiences. Accommodators approach problems in an intuitive, trial-and-error manner and they obtain information from other people rather than through their own analytic abilities.'

Honey and Mumford

Honey and Mumford expanded Kolb's work, giving us one of the most widely used models, their Learning Styles Questionnaire (LSQ).

Honey and Mumford define a learning style as being 'a description of the attitudes and behaviour which determine an individual's preferred way of learning'^{vii}.

They defined four learning styles which built on those from Kolb. Activist, Reflector, Theorist, Pragmatist are the preferences Honey and Mumford use



In the table below, Honey and Mumford (2000) detail the strengths and weaknesses of each style.

Style	Strengths	Weaknesses
Activists	<ul style="list-style-type: none"> ● Flexible and open-minded. ● Ready to take action. ● Like to be exposed to new situations. ● Optimistic about anything new and therefore unlikely to resist change. 	<ul style="list-style-type: none"> ● Tendency to take the immediately obvious action without thinking through possible consequences. ● Often take unnecessary risks. ● Tendency to do too much themselves and to hog the limelight. ● Rush into action without sufficient preparation. ● Get bored with implementation/consolidation/follow through.
Reflectors	<ul style="list-style-type: none"> ● Careful. ● Thorough and methodical. ● Thoughtful. ● Good at listening to others and assimilating information. ● Rarely jump to conclusions. 	<ul style="list-style-type: none"> ● Tendency to hold back from direct participation. ● Slow to make up their minds and reach a decision. ● Tendency to be too cautious and not take enough risks. ● Not assertive; not particularly forthcoming and have no 'small talk'.
Theorists	<ul style="list-style-type: none"> ● Logical, 'vertical' thinkers. ● Rational and objective. ● Good at asking probing questions. ● Disciplined approach. ● Grasp of the 'big picture'. 	<ul style="list-style-type: none"> ● Restricted in lateral thinking. ● Low tolerance for uncertainty, disorder and ambiguity. ● Intolerant of anything subjective or intuitive. ● Full of 'shoulds, oughts and musts'.
Pragmatists	<ul style="list-style-type: none"> ● Eager to test things out in practice. ● Practical, down to earth, realistic. ● Businesslike – get straight to the point. ● Technique-oriented. 	<ul style="list-style-type: none"> ● Tendency to reject anything without an obvious application. ● Not very interested in theory or basic principles. ● Tendency to seize on the first expedient solution to a problem. ● Impatient with indecision. ● More task-oriented than people-oriented.

An expansion on this work, drills down into specific methodologies which would suit each style. This should not be seen as an 'only use this with this style approach', but a guide to how to prevent total incongruency of methodology to learner.

In 'using your learning styles' (1986) they suggest ways in which you can improve your style, intimating that these are preferences rather than 'fixed' styles.

Gardner's multiple intelligences

Gardner was one of the first to teach us that we should not judge and develop people according to an arbitrary and narrow definition of intelligence. We must instead rediscover and promote the vast range of capabilities that have a value in life and organisations, and then set about valuing people for who they are, what they can be, and helping them to grow and fulfil their potential.^{viii}

type	description	preferred learning style clues
Linguistic	words and language , written and spoken; retention, interpretation and explanation of ideas and information via language, understands relationship between communication and meaning	words and language
Logical-Mathematical	logical thinking , detecting patterns, scientific reasoning and deduction; analyse problems, perform mathematical calculations, understands relationship between cause and effect towards a tangible outcome or result	numbers and logic
Musical	musical ability , awareness, appreciation and use of sound; recognition of tonal and rhythmic patterns, understands relationship between sound and feeling	music, sounds, rhythm
Bodily-Kinaesthetic	body movement control , manual dexterity, physical agility and balance; eye and body coordination	physical experience and movement, touch and feel
Spatial-Visual	visual and spatial perception ; interpretation and creation of visual images; pictorial imagination and expression; understands relationship between images and meanings, and between space and effect	pictures, shapes, images, 3D space
Interpersonal	perception of other people's feelings ; ability to relate to others; interpretation of behaviour and communications; understands the relationships between people and their situations, including other people	human contact, teamwork communications, cooperation,
Intrapersonal	self-awareness , personal cognisance, personal objectivity, the capability to understand oneself, one's relationship to others and the world, and one's own need for, and reaction to change	self-reflection, self-discovery

Source <http://www.alanchapman.com>

Gardner details specific preferred learning styles for each of the intelligences. This should be considered when designing and delivering training solutions. In a classroom, it will be impossible to satisfy each of the Gardner intelligences totally. The aim is to create the right environment for the individual to learn, giving regard to the preferences.

It's a case of different strokes for different folks.

Visual, Auditory and Kinaesthetic

Learners use all three to receive information. However, one or more of these receiving styles is normally dominant. This dominant style defines the best way for a person to learn new information by filtering what is to be learned. This style may not always be the same for some tasks. The learner may prefer one style of learning for one task, and a combination of others for another task.

The VAK learning styles model provides a very easy and quick reference inventory by which to assess people's preferred learning styles, and then most importantly, to design learning methods and experiences that match people's preferences:

Visual learning style involves the use of seen or observed things, including pictures, diagrams, demonstrations, displays, handouts, films, flip-chart, slides.

Auditory learning style involves the transfer of information through listening: to the spoken word, of self or others, of sounds and noises.

Kinaesthetic learning involves physical experience - touching, feeling, holding, doing, and practical hands-on experiences.^{ix}

Individuals will give us clues as to their VAK preferences:

Visual thinkers will tend to use and respond to terms such as:	Auditory thinkers will tend to use & respond to terms such as:	Kinaesthetic thinkers will tend to use & respond to terms such as:
<ul style="list-style-type: none"> ● I get the picture ● I see that now ● From my perspective ● What's your view? 	<ul style="list-style-type: none"> ● I get the message ● That rings a bell ● That strikes a chord ● Sounds OK to me 	<ul style="list-style-type: none"> ● How does that grab you? ● A grasp of the basics ● It certainly feels right ● I can relate to that

Source Fewing

Being sympathetic to these 3 preferences allows for an adaptation of coaching and training method. Our approach should be to identify the learners' dominant style and amend our techniques as necessary.

References

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^{viii} www.alanchapman.com

^{ix} www.alanchapman.com

This paper has been provided as essential background reading to understand how people learn. It is a critique and review of the learning styles methodologies available. Please acknowledge source authors.

Thanks

[Phil LaViolette](#)