Learning styles in today's business domain: a reflection [1]

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Abstract

It comes as no surprise that people have different learning styles and for the better part, it is presumably safe to state that learning styles are merely instruments to categorise different learning traits, processes and behaviours, which in turn, assist people to learn. Because learning styles has not proven any universally accepted models, it continually remains one of the most talked about and debated topics among educators and managers in the business environment. This theoretical paper aims to examine the validity of learning styles in today's business domain, drawing specifically on the 13 families of learning style models outlined by Coffield, et al, (2004) with the purpose to stimulate debate on whether they warrant any business soundness in its principles or are they just inflated drivel. This paper does not claim that learning styles are fictionalised by their respective authors but rather to shed light if the values of their researches can be bunked, if proven to be hogwash.

Keywords: Learning style, project management, performance improvement

Introduction

Learning depends on the individual, the learner. When it comes to collecting and organising information (tacit knowledge) into useful knowledge (explicit knowledge), every learner has their own learning style and personality; often making it difficult to assume what works for them will necessarily work for others, and vice-versa. For example, an introverted employee might find it easier to communicate to his peers via email than in face-to-face scenarios. From a manager or trainer's standpoint, this indicates a reasonable evaluation of a learning style based on the observation of the employee's personality however, this poses the issue that the speculated detection could be wide of the mark, and could explain why there is a vast array of different learning style misconceptions in today's organisations. The complexity and the lack of an all-encompassing conglomerate for learning style models are mainly because the research area in this field has become mostly fragmented (Aharonian, 2014).

The notion of individualising learning styles is nothing new and accounts a range of contested and opposing theories (Coffield, et al., 2004) over the past few decades; all with the common thread that individuals differ in how they learn. (Willingham, et al., 2015). The sheer volume of works in this field may suggest that the supposition, at the heart of each learning style theory, should be the assessment of the learner's learning style and the 'best fit' to adapt for a learner (Pritchard 2014). There is ample evidence to suggest that people express preferences on how they perceive and receive implicit and explicit information (Pashler, et al.,2008), even though very few studies suggest the usefulness and validity in learning styles in organisations. Critics

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and practitioners in the field of management say there is no scientific evidence that hints that identifying an employee's learning style produces better work outcomes (Vasquez, 2009).

Perhaps one of the mistaken concepts surrounding most schools of learning styles is that it yields superior learning for those who adhere to the theory (Aharonian, 2014). Evidently, those in management and business learning development were quick to 'jump on this bandwagon', propagating claims of productivity and efficiency in the work environment. Perhaps the notion of learning styles is appealing and takes strong hold with those in management but as often experienced in the 'real world', learning styles is hardly in alignment with employees' learning styles (or lack thereof), since there is no scientific evidence to suggest that learning styles approaches affect work outcomes.

At best, theorists who support learning styles are merely purporting instruments that measure 'learning preferences' (Pashler, et al.,2008). Cassidy (2004) however, did attempt to deconstruct the concepts and processes of learning styles even though there was a prevailing *"danger of over-simplifying a complex subject".* Coffield, et al. (2004) on the other hand, conclude in their findings that learning styles have four distinguish limitations, namely - 1. *"learning styles is theoretically incoherent and conceptually confused; the endless overlapping and poorly defined dichotomies such as 'verbal' v 'auditory' learners"* shows no scientific justification, 2. *"not all learning styles questionnaires are alike…only 1 met the 4 minimal standards for a psychological test and it was designed for use, not in education, but in business"*, 3. *"the questions posed in learning styles tests are devoid of any particular context, as though learning was a free-floating skill that is independent of the subject or problem being studied. It is not possible, for instance, to learn to become a hairdresser or a plumber by using the same learning style"*, and 4. *"students' learning is enhanced by teaching tailored to their learning styles."*

Another key difference among the various learning style theories is the extent in which their creators consider 'stable' or 'hard-wired' in the learners' minds. Some theorists are rooted in the thinking that learning styles are 'hereditarily fixed traits', while others believe that experience (an event which leaves an impression on the learner), environment (the learning nature), and curriculum design, can influence on how an individual perceives learning (Cassidy, 2004).

Limitations in learning styles models

Most learning styles commonly present the same in context with similar measurement tools (Markham, 2004), with some authors attempting to explore at how all this commonality might be conceptualised (Curry, 1990), while others have attempted empirical work on the coherence of learning styles (Sadler-Smith, 2001). Yet, an issue in the eye of the authors is whether important components in learning can be identified, given the intricacy of drawing together a multitude of complex theories and research. Despite the complexity in learning styles, there appears to be relatively definitive messages concerning limitations among the more influential theories (Coffield, et al. (2004):

- A lack of evidential base to back any one theory of learning styles that warrants the learning outcomes and their use. This in effect, could serve as evidence of the limitations of any learning styles theory, and indeed of the field altogether. Pashler, et al. (2008) argue that there is little evidence to support learning styles concepts in most learning styles theories,
- A lack of coherent definition of learning styles that effectively explains what learning styles are. Coffield, et al. (2004) identified as many as 70 ways to describe a learner's preferred learning style in their findings,
- Any learning style or model is essentially a *"simplification on the complexity of how learns learn"* (Markham, 2004),
- The absence of an acceptable standard to measure learning styles – more to the point, there is insufficient scientific proof that learning styles is *"technically supportable as reliable and valid measures"* (Markham, 2004),
- The suggestion that the questionnaires used to determine learning styles is unreliable. Learners who conduct self-evaluation of themselves are prone to 'under-assess' their actual performance, which often demonstrates a poor correlation between actual performance and actual learning styles (Markham, 2004),
- An inadequate understanding of whether learning styles can have probable negative impacts on both the learner and instructor, and whether appropriate safeguards are in place to reduce those negative impacts,
- The intrinsic danger of labelling or 'pigeonholing' a person's learning style, given the absence of robust evidence in learning styles methods.

Learners are buyers

The commercialisation of learning styles makes it very lucrative in the business sense. There is much speculation that learning styles are closely connected with the for-profit space, with many theorists rushing *"prematurely into print and marketing with very early and preliminary indications of factor leadings based on one dataset"* (Curry, 1990). Curry points to the danger that such marketing makes some theorists more utilitarian and therefore, diverging learning styles into non-statistical groundwork via *"self-declaration questionnaires, online tests and tasks, or interviews"* (Sharp et al., 2008).

While it remains to be under much scrutiny, learning styles continues to be marketable and profitable. A Google search for 'learning styles courses' will retrieve more than 32.8 million results, with the mainstream offering books, articles, manuals, DVD's, measurement instruments, learning tools, self-diagnosis tests, workshops, and conferences; all the while promising to optimise a person's learning style skills for a price.

Some controversial tests and tools are sold at prices ranging from $5 for an online assessment, $100 for a booklet of Kolb's Learning Style Inventory (LSI), to even $1,225 for a training program for instructors. However, in protecting their reputations, leading theorists like Rita Dunn, for example, oppose to the term of 'commercialisation' when refuting criticism about the cost of her Learning Styles Inventory. Dunn insists that a committed and avid learner can easily implement her 22-element model, but *"it is also necessary to be trained by her and her husband in a*

New York hotel. The training course costs $950 per person and lasts for 7 days with a further outlay of $1,384 for accommodation." (Coffield, et al., 2004).

It is reported that the Dunn and Dunn learning styles model is widely used in elementary schools across the United States due to its popularity and influence, while Kolb's Learning Style Inventory (LSI) and Honey and Mumford's Learning Styles Questionnaire (LSQ) are extensively used in the United Kingdom. "*The cost of training all 400,000 teachers in England in the Dunn methodology would clearly be expensive for the government, but lucrative for the Dunns"* (Coffield, et al., 2004). Much of what is being sold in the thriving commercial space comprises of inflated claims, fragmented and false promises, and *"sweeping conclusions which go beyond the current knowledge base and the specific recommendations of particular theorists"* (Coffield, et al., 2004). Moreover, Coffield, et al. go on to illustrate that some theorists *"make extravagant claims for their model, which reflect badly on the whole field of learning styles and research"* (2004). Claims like *"within six weeks, I promise you, kids who you think can't learn will be learning well and easily…..the research shows that every single time you use learning styles, children learn better, they achieve better, they like school better."* (O'Neil on Dunn, 1990), disseminate a lack of evidence to back Dunn's claim.

Given its lucrative influence, the commercialisation of learning styles is a clear cause for concern and should serve as a warning sign for those wanting to investigate its effectiveness. Without proof, the 'for-profit learning experts' who claim the success of their learning models, based on fabricated data, do certainly have a lot to gain. Some critics believe that *"it is vital to ascertain if the use of learning styles benefit learners as much as is claimed, and not just the business who are profiting from them."* (Pashler, et al.,2008)

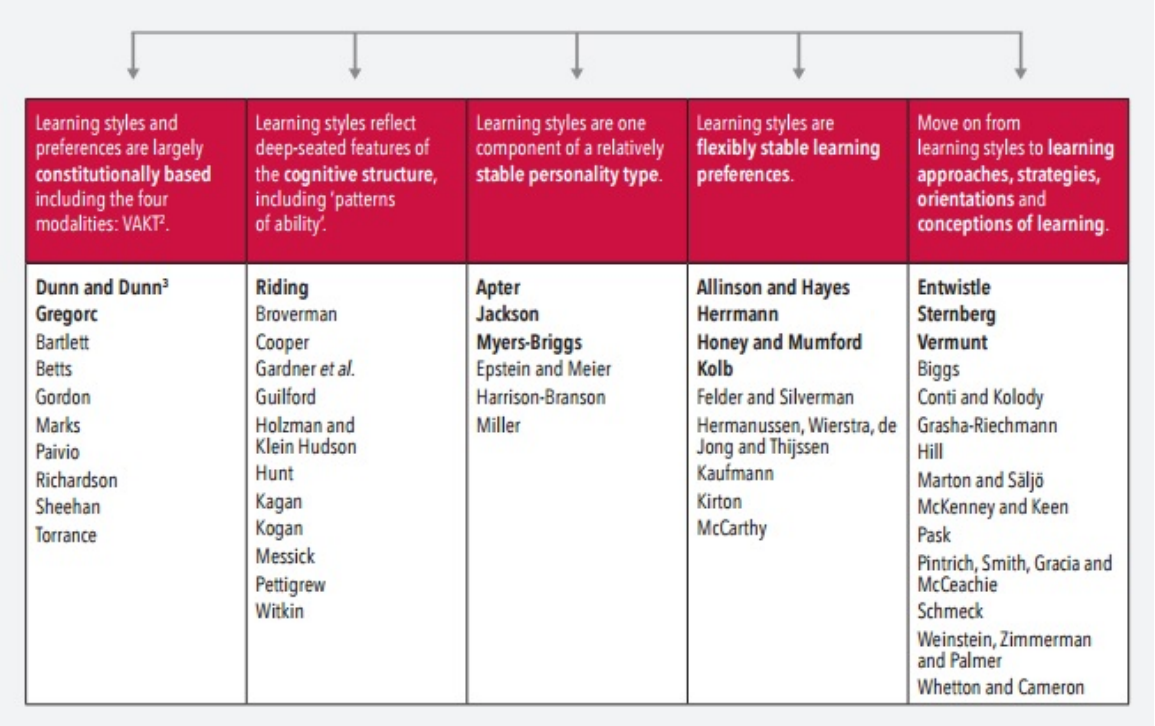
Learners in pigeonholes

The peril that comes as a result from labelling employees is that sometimes employees will believe and will act accordingly to their learning styles. Often the temptation to label, pigeonhole, or stereotype is difficult to resist, especially when most of the learning styles instruments are easily accessible in the mainstream domain. The downside is that it leads to the implicit belief that learning styles cannot be changed, whilst promoting a lopsided view of learning styles, that could be *"limiting rather than liberating."* (Coffield, et al., 2004).

Most learning styles hinge on the word 'types', meaning they assign learners into distinct groups. The premise that learners cluster into separate groups of learning styles, receives very little, if any, support from objective researchers like Kirschner and Merriënboer. According to Kirschner and Merriënboer (2013), pigeonholing learners creates three concrete problems:

- Many learners do not fit one specific style; sometimes it is the case of many styles, and sometimes it is the case of none,
- The methodology used to assign people into learning styles is often inadequate, and often an assertion or proposition, which forms the basis of a theory, and
- An extensive agglomeration of different learning styles can be cumbersome to link certain learners to specific styles, in some cases.

Coffield, et al. argue that theorists are often in conflict with each other in their assumptions about the process of learning. Referring to the below table, they cite some theories draw special attention to the importance of brain neural functions in determining how people learn, while others emphasise the attribution of psychological theories, deriving from intellectual abilities and personality traits. While these different theories present a repertoire of learning styles, they also present pigeonholing learners one way or another.



Learning styles and preferences are largely **constitutionally based** including the four modalities: VAKT[2].	Learning styles reflect deep-seated features of the **cognitive structure**, including 'patterns of ability'.	Learning styles are one component of a relatively **stable personality type**.	Learning styles are **flexibly stable learning preferences**.	Move on from learning styles to **learning approaches, strategies, orientations** and **conceptions of learning**.
Dunn and Dunn[3]	**Riding**	**Apter**	**Allinson and Hayes**	**Entwistle**
Gregorc	Broverman	**Jackson**	**Herrmann**	**Sternberg**
Bartlett	Cooper	**Myers-Briggs**	**Honey and Mumford**	**Vermunt**
Betts	Gardner *et al.*	Epstein and Meier	**Kolb**	Biggs
Gordon	Guilford	Harrison-Branson	Felder and Silverman	Conti and Kolody
Marks	Holzman and Klein Hudson	Miller	Hermanussen, Wierstra, de Jong and Thijssen	Grasha-Riechmann
Paivio	Hunt		Kaufmann	Hill
Richardson	Kagan		Kirton	Marton and Säljö
Sheehan	Kogan		McCarthy	McKenney and Keen
Torrance	Messick			Pask
	Pettigrew			Pintrich, Smith, Gracia and McCeachie
	Witkin			Schmeck
				Weinstein, Zimmerman and Palmer
				Whetton and Cameron

Source 1:Families of Learning Styles. Adapted from Learning styles and pedagogy in post-16 learning: A systematic and critical review (p. 9), F. Coffield, D. Moseley, E. Hall, & K. (2004). London: Learning and Skills Research Centre.

Reflection: The e-Learning Platform Implementation

In all my fifteen-year tenure working in the bank, the one thing that struck me as the fundamental characteristic of the workplace environment is - there are almost as many learning styles as there are a diverse range of employees.

I recall being seconded in a key roll out of an e-Learning platform as part of a transformational change to enhance the bank's learning environment, initiated by the new incoming Director of Learning and Development, at the time. The scope was nothing out of the ordinary, given that the bank had already implemented an e-Learning platform previously, and one that still existed.

From under the breath of some employees, I remember hearing their grumbling, muttering the words "not another e-Learning." In that instance, I knew that this project was going to be an uphill battle and no easy feat for the project team. Two truths were, we had a culture where learning was not a priority for most employees simply because there was never enough time during work hours to undertake learning modules on top of the expected workload; and people took a general dislike

to e-Learning no matter how good or beneficial it was proven. It was clearly the case of ‘pain outweighing benefits.’ I also knew (and I am certain the new Director of Learning and Development did as well), that some hard persuasion was needed to convince the benefits of e-Learning to the unhappy and uninspired team.

As the e-Learning implementation rolled out, signs of disinterest became apparent and employees question the intent of having two e-Learning platforms, when one was hardly ever used. Also, the lack of log-ins into the platform in the initial month of application was a tell-tale sign of the team’s overall disapproval and lack of enthusiasm. After six months of running, the e-Learning platform became dormant and eventually ceased operation since high inactivity was the main culprit. I recall wondering, perhaps the platform lacked quality content to inspire and engage employees, or perhaps it was the ineffective approach to have everyone ‘on board’ in the buy-in of the project, or maybe the staff’s on-going learning and development was not given special importance or emphasis.

For whatever the reason, for me, the main takeaway from the experience was an evidence-based or ‘real-life case’ approach to learning was much needed and would have prevented the wasteful implementation on an ineffective e-Learning intervention. The e-Learning project failed to produce sufficient evidence that there were benefits to learning and that it was a valuable teaching tool for the employees. Instead, it promoted resentment and drudgery and missed the opportunity to engage employees to seek their own development path while addressing their weaknesses as well. To the detriment of the team, the project neglected to recognise the need to make meaningful changes that impact staff development.

The dogma that learning styles may be perceived as ‘irresistible’ because people like to be seen by others as unique individuals is somewhat flimsy and contestable. e-Learning is hardly that. At best, e-Learning is very much visual-spatial, meaning it accommodates employees whose learning styles are generally visual or holistic. It does not account the sequential or ‘in parts’ learners for optimal success. In my years of management, I have found that employees learn best when there are relevancy and benefits linked to what is being learned. For example, if e-Learning was to equip an employee with the tools and knowledge to get better sales results, that leads to better incentive rewards, then perhaps the benefits could be better illustrated in a way that encourages the employee to learn. But as denoted in the e-Learning implementation, this was not exhibited. Again, it was the case of pain outweighing benefits.

The real quandary that I have with learning is that we have since misplaced the valuable excuse, “I genuinely don’t know how to do this” for our own incompetence with age-old adages like, “I was never taught in the proper way to do that.” We should likewise be careful, as well as critical, when relying on learning styles to educate employees. Since learning styles have yet to be scientifically validified, I am conscious that categorising employees into their learning styles is more harmful than good. However, that is not to say in time, the rapid advancements in this field will most likely produce more reliable and concrete evidence of the benefits that learning styles can induce. Until the surfacing of such, we simply cannot draw on a definitive conclusion about the validity and effectiveness of learning styles, along with their suitability in the business environment.

Conclusion

While learning styles remain generally inconsistent with what they are intended for, it is important to note that all employees have their own concoction of learning preferences. Imposing a learning style and sticking to a specific learning model will severely pigeonhole a learner who otherwise might prove flexible.

In the commercial context, fortunes are being made from the sales of learning styles methods by those who claim they 'have the answers' to untapping people's learning styles. The hidden pitfall to over commercialisation is that learning styles results can be diluted with financial incentives, resulting a vague, if not misleading, use of the terms to indicate people's learning capabilities. Succinctly, those financial incentives are more likely to encourage further build-up of supplemental methodologies, instruments, tools, workshops, and whatever else commercially viable. It needs to be said that not all influential theorists in the learning space are out to make money but rather to research, understand, and enhance the proliferation of learning capabilities of individuals and organisations.

To increase the understanding of employees' learning styles, it is essential that learning styles should only be employed as they were preconceived – 'as aids, and not dogmas.' Learning is an experience in that it furnishes the learner with different perspectives and rewards him/her with a wealth of knowledge. There are no 'no right or wrong types' in learning styles and they certainly are not 'markers of intelligence'.

Despite the theory that learning styles approaches presume that different people learn in different methods, there is little or no empirical evidence that supports that theory. From within the field of learning, critics like Cassidy, Coffield, et al., and Pashler, et al., are calling for consolidation, proper interpretation, and integration of more refined and robust psychometric tools and methods to shed further light on their validity and effectiveness. Learning styles, with their instruments and questionnaires, cannot provide answers to psychological variables that ultimately determine a person's learning style. Those variables, namely intelligence, aptitude, and personality traits, all ultimately affect the essence of psychology. And since psychology is a science, it must be supported by scientific evidence at all cost. For without evidence, learning styles remains under much scrutiny by critical observers and by those who are compelled to believe that it is nothing more than trifling hogwash.

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Appendix:

The following are the summarised key points of the 13 most influential and widely used learning styles models, adapted from Coffield et al (2004).

Gregorc – Mind Styles Delineator
• Two dimensions: concrete-abstract and sequential-random
• Most learners prefer a variety of instructional approaches
• Issues of validity and reliability
• No empirical evidence that using Gregorc's model brings any learning benefits
Dunn and Dunn – Learning Styles Questionnaire/Inventory
• Four styles: environmental, sociological, emotional, physical
• Aims to help teachers identify individual instructional preferences and adapt pedagogy and the learning environment accordingly
• Widely used internationally
• Lack of independent research to support this model
Riding – Cognitive Styles Analysis
• Two dimensions: wholist-analytic, verbaliser-imager

• Evidence of links between cognitive styles and instructional preferences
• Need to take working memory into account as well as cognitive styles
• Although the model has potential value, Riding's instrument for measuring cognitive style is not reliable
Myers-Briggs – Myers-Briggs Type Indicator
• Based on Jung's theory of personality – four bipolar scales (perceiving/judging, sensing/intuition, thinking/feeling, extraversion/introversion) producing 16 personality types
• Conceived as a tool to categorise personality, not just approaches to learning
• Limited evidence that matching teacher and learner types may increase performance
Apter – Motivational Style Profile
• Based on motivational 'states', not fixed types, in four domains: means–ends, rules, transactions, relationships
• Theory of personality, not learning style
• Although not widely researched, the theory's emphasis on motivation may have considerable relevance for education
Jackson – Learning Styles Profiler
• Four types: initiator, reasoner, analyst, implementer
• Mostly used in business
• Emphasises the importance of personal development through building up multiple strengths
Kolb – Learning Styles Inventory
• Four styles: active, reflective, abstract, concrete
• Learning styles are not fixed personality traits, but relatively stable patterns of behaviour
• Students should gain competence in all four learning styles to become balanced, integrated learners
Honey and Mumford – Learning Styles Questionnaire
• Four types: activists, reflectors, theorists, pragmatists
• Learning style is defined as 'a description of the attitudes and behaviour which determine an individual's preferred way of learning'
• Most people exhibit more than one trait
Herrmann – Brain Dominance Instrument
• Four types: theorists, organisers, innovators, humanitarians
• Most people have two or more strong preferences
• Originally based on brain research, but social, cultural and experiential factors are more important in determining learning preferences
• Learners should develop the flexibility to respond to particular learning situations, regardless of their natural preferences
• Well established in business but not widely used in education
Allinson and Hayes – Cognitive Styles Index
• One bipolar dimension: intuition-analysis
• Relatively high level of validity and reliability
• Intended for use in business rather than education
Entwistle – Approaches and Study Skills Inventory for Students (ASSIST)

• Three approaches: deep, surface, strategic
• Deep learning is seen as the most effective and beneficial
• Intended to characterise approaches, not individuals
• Widely used in UK higher education
• Offers recommendations for designing instruction to promote deep learning
Vermunt – Inventory of Learning Styles
• Four approaches: meaning-directed, application-directed, reproduction-directed, undirected
• Each learning style affects five dimensions: cognitive processing, learning orientation (motivation), affective processes (feelings about learning), mental model of learning, regulation of learning
• Used mainly in higher education
• Combines cognitive and emotional aspects
• Emphasis on the teaching-learning environment rather than individual differences
Sternberg – Thinking Styles
• Thirteen thinking styles divided into three functions, four forms, two levels, two scopes and two leanings
• Distinguishes between styles and abilities – a style is 'a preferred way of using the abilities one has'
• Learners have a profile of styles, not just one single style
• Profiles of styles may differ according to gender and cultural background

Source 2: http://www.becta.org.uk (2005), Accessed: 17 June 2017