

Learning about 'Learning Styles' in Getting Research into Policy Use and Practice?

This paper was prompted by presenting our internal work within IDS. Reflecting on the intermediary sector and considering its role in getting research into use, this paper was born out of the question 'Can the lessons from the adult education sector on learning styles and preferences add anything to our understanding of how our work might reach decision makers?'

Introduction

The purpose of this thinkpiece was to ask the question whether the theory and lessons learnt from 'learning styles research' within adult education could inform and stimulate discussion on the different means of communication employed by intermediaries such as IDS and the IK Mediator network. Could lessons from that educational sector enable a more nuanced approach of intermediaries to their target audiences i.e. policy makers, academics, knowledge service officers, NGOs, practitioners etc? Could it stimulate more demand for their services, and could it make their service more effective?

Our starting hypothesis was relatively simple:

- 'Learning styles' as discussed in the education sector suggests that adult learners have many different learning styles/preferences. The basic premise is that when adults take in new information, it will be understood and absorbed when it appeals directly to that adult's learning style preferences.
- The target audiences of intermediaries are adults
- Therefore, in order to communicate our messages about research as effectively as possible it seems reasonable to suggest that we need to appeal to many different learning style preferences. This may mean duplicating messages in different styles and using a variety of media (if we are to get messages across and influence as many people as possible).

This paper outlines our thinking and explores the core question.

In each Practice Paper published by the **Impact and Learning Team**, we share our experience and learning. We are presenting ideas that we are exploring and that others in the intermediary sector might like to explore.

Our experiences contribute to the body of knowledge, but rarely if ever contain incontestable insights. This paper should not be read in isolation, however, and should be seen as complementary to other work conducted on related issues of capacity development, knowledge management, and policy influence.

The knowledge and information intermediary sector comprises those who seek to improve flows of knowledge between actors in decision making and change processes in order to generate better development outcomes. Intermediaries act in a range of ways: enabling access to information; helping people to make sense of it; facilitating connections that enable knowledge to be shared between stakeholders. It is a practice sector which cuts across other sectors.

Learning styles – theory

There are of course many ways of learning, approaching learning and processing information. However, ‘Learning styles’ was proposed as one description of the diversity of ways in which human beings process information. The idea of ‘learning styles’ was originally mentioned in the 1950s but gained popularity from the 1970s onwards and is now used and discussed by teachers, course designers, marketers and communicators. It has become conventional wisdom.

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 (1992: 1).

It is commonly believed that:

- We all have learning style preferences with which we are more comfortable and which are effective for allowing us to internalise information;
- One single teaching style does not work for every student or even most students all of the time;
- If students are aware of their own learning preferences they are able to plan their own learning strategies to take advantage of their strengths (Leite, Svinicki and Shi 2009).

There is a considerable range of propositions and frameworks for learning styles. Some frameworks focus on ways of perceiving or perceptual preferences. For example Fleming’s VAK/VARK model (2001) is one of the most common and widely-used models and categorises learning according to the senses. The acronym “VARK” consists of:

- Visual learners
- Auditory learners
- Reading/writing-preference learners
- Kinaesthetic learners or tactile learners

Still other frameworks focus on processing information (e.g. Kolb 1984; Honey and Mumford). For example Honey and Mumford based their four learning styles on Kolb’s (LSI) Experiential Learning Model and focused on general behavioural tendencies rather than learning:-

- Activist preference learners love to be engaged in learning by doing and having as many experiences as possible.
- Reflector preference learners: like to think about things, reflect, review experiences.
- Theorist preference learners like to know where ideas come from, what research underpins ideas.
- Pragmatist preference learners like practical ideas that can be applied to real-life situations.

If these are the theories, then can they be applied to the intermediary sector, and to adult policy ‘learners’?

Learning styles – evidence?

Having wondered about how learning styles might influence the uptake of research with policymakers, we intentionally looked for evidence that might support the learning style conventional wisdom. While almost every professional educator will discuss learning styles and be aware of the theories, there is actually very little research evidence to support the the hypotheses proposed by these theories.

Cognitive psychologists

If we look first at evidence of learning style use with children (Willigdon 1987) a meta-analysis of 39 classroom learning style studies found no evidence that teaching to a child’s best modality had an impact on learning. This meta-analysis brings together the work of cognitive psychologists, and illustrates how memory works in terms of meaning - not in terms of whether one saw, heard, or physically interacted with the information.

Association for Psychological Science

This psychological approach was pursued in 2008 by the Association for Psychological Science who commissioned a panel of psychologists and cognitive scientists to review the evidence for learning styles. Their review found that: ‘Although the literature on learning styles is enormous, very few studies have even used an experimental methodology capable of testing the validity of learning styles applied to education. Moreover, of those that did use an appropriate method, several found results that flatly contradict the popular meshing hypotheses.’

They go on to state ‘our search of the learning-styles literature has revealed only a few fragmentary and unconvincing pieces of evidence that meet this standard, and we therefore conclude that the literature fails to provide adequate support for applying learning-style assessments in school settings. Moreover, several studies that used appropriate research designs found evidence that contradicted the learning-styles hypothesis (Massa and Mayer 2006; Constantinidou and Baker 2002). Finally, even if a study of a particular learning-style classification and its corresponding instructional methods was to reveal the necessary evidence, such a finding would provide support for that particular learning-style classification only’.



UK Learning and Skills Development Agency

In 2004, the UK Learning and Skills Development Agency commissioned an evaluation of learning styles models and their effectiveness in post-16 learning by Coffield, Moseley, Hall and Ecclestone.

This is quite a study! It is a systematic review of the different models. Beyond Kolb and Honey and Mumford mentioned above, it lists:-

- Allinson and Hayes' Cognitive Styles Index (CSI)
- Apter's Motivational Style Profile (MSP)
- Dunn and Dunn's model and instruments of learning styles
- Entwistle's Approaches and Study Skills Inventory for students (ASSIST)
- Gregorc's Styles Delineator (GSD)
- Herrmann's Brain Dominance Instrument (HBDI)
- Honey and Mumford's Learning Styles Questionnaire (LSQ)
- Jackson's Learning Styles Profiler (LSP)
- Kolb's Learning Style Inventory (LSI)
- Myers-Briggs Type Indicator (MBTI)
- Riding's Cognitive Styles Analysis (CSA)
- Sternberg's Thinking Styles Inventory (TSI)
- Vermunt's Inventory of Learning Styles (ILS)

They conclude that ‘A reliable and valid instrument which measures learning styles and approaches could be used as a tool to encourage self-development, not only by diagnosing how people learn, but by showing them how to enhance their learning.’

The core component of this positive conclusion is ‘self development’. The very discussion of learning styles helps students to identify what works for them. However, as soon as we turn to using the learning styles as an external instrument to tailor pedagogy, we find they are much more negative in their conclusions. They note that learning style changes might only have a marginal affect compared to other ranked improvements in the teaching environment.

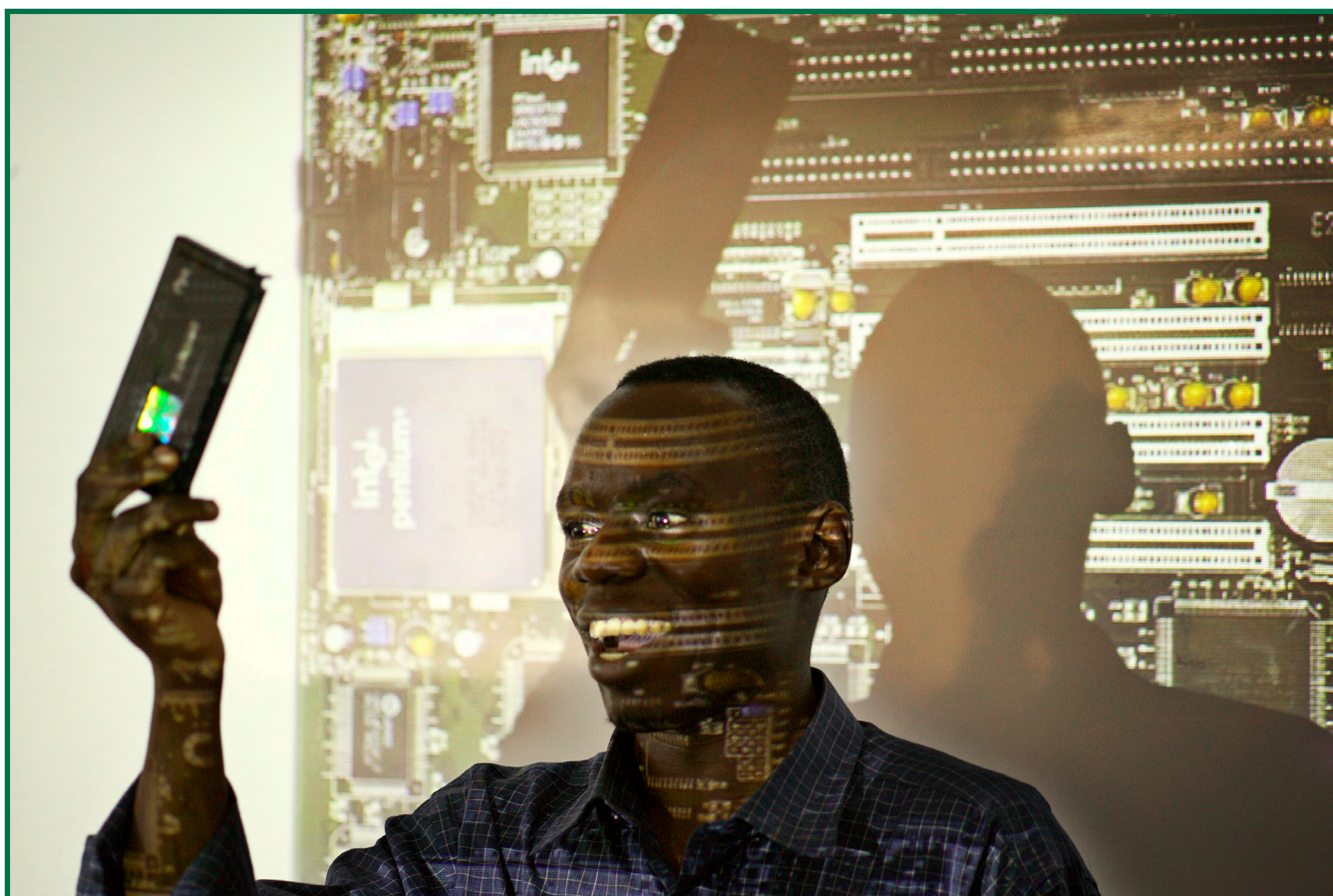
And when they get to evidence, they are even more scathing. ‘Each model was examined for evidence, provided by independent researchers, that the instrument could demonstrate both internal consistency and test-retest reliability and construct and predictive validity.’

‘Only three of the 13 models – those of Allinson and Hayes, Apter, and Vermunt – could be said to have come close to meeting these criteria. A further three – those of Entwistle, Herrmann, and Myers-Briggs met two of the four criteria. The Jackson model is in a different category, being so new that no independent evaluations have been carried out so far. The remaining six models, despite in some cases having been revised and refined over 30 years, failed to meet the criteria and so, in our opinion, should not be used as the theoretical justification for changing practice.” (Our emphasis).

Indeed in the sister publication *Learning Styles and Sedagogy in Post-16 Learning: a Systematic and Critical Review*. The same authors state ‘[S]ome of the best known and widely used instruments have such serious weaknesses (e.g. low reliability, poor validity and negligible impact on pedagogy) that we recommend that their use in research and in practice should be discontinued.’ (Again our emphasis).

A strong statement which they do temper with the next sentence ‘On the other hand, other approaches emerged from our rigorous evaluation with fewer defects and, with certain reservations detailed below, we suggest that they deserve to be researched further.’

Such lack of evidence calls into question our simple hypothesis about learning styles potentially offering insight into how (policy-making) adults might learn from research and evidence? And yet having questioned it through evidence, learning styles nevertheless remain the conventional wisdom of the educational sector, and the lack of evidence according to Coffield *et al*, may be more due to lack of research than fundamental flaws with the theory.



Coffield Report

Finally, the Coffield report also adds some common sense which has in our mind significant resonance when considering the research policy uptake: 'The main charge here (against learning styles) is that the socio-economic and the cultural context of students' lives and of the institutions where they seek to learn tend to be omitted from the learning styles literature.'

They go on to point out that not all learners are alike. Learners are not suspended in cyberspace nor do they live in a laboratory. They point to the socioeconomic setting that real people live their real lives in, and draw attention to how this setting affects their attitudes to learning. They go on to say that 'Moreover, their social lives with their partners and friends, their family lives with their parents and siblings, and their economic lives with their employers and fellow workers influence their learning in significant ways. All these factors tend to be played down or simply ignored in most of the learning styles literature.'

Application to Infomediaries - so how does this apply to our work?

It would seem reasonable to assume that the teaching environment translates to, or has an equivalence in the enabling environment for researcher brokerage. If this is the case, then we can take some of the learning around learning styles and use it to refine our intermediary approaches. Learning styles is a dimension of intermediary work that can influence how our work is carried out.

While the evidence supporting the conventional wisdom of learning styles may be weak, and it may be the case that there is no single framework that can point to a body of test-retest research, nevertheless the wide acceptance of learning styles suggests it resonates widely with experience. What the evidence suggests is that the idea of learning styles is useful for students to determine their own preferences, and much of the uncertainty surrounding its validity arises when it is applied in a pedagogical setting by the trainer or tutor.

So given that there is some validity to considering learning styles, how can we apply this body of work to the work of intermediaries?

- **Even for those who have a preference for reading/writing, in written work there are different writing styles.** Academic research/discourse tends to be in print form i.e. published articles – more weight being given to double-blind refereed journal articles. However, consider these from a learning styles point of view. Academic articles are usually written in the third person (passive voice). If we refer to a model of learning styles, they suggest that even if someone prefers reading, they may be overlaid with a preference for stories rather than the passive voice. Interestingly, if one looks at engineering journal articles from the turn of the 19th century, articles were written in the first person – 'I did this, we then did that'. Experiments were explained not in the abstract but in the practical. While the conventional wisdom is that academic, rigorous work needs to be presented in the passive voice, the widespread use of film and television, and even the emergence of blogging, suggest that stories are illustrative. There are many adults that relate to stories, connecting with information through personal identification.
- **Some people might respond more to a visual style.** Visual learners of the VARK model will more likely respond to graphics depicting research evidence than text. However in addition to people's personal preferences, the evidence basis of learning styles suggests that information often has its most natural form. It is difficult to describe audibly the shape of the borders of Kenya and yet a graphic communicates some aspects of that border very easily. In a world where ICT is making graphical imaging easier, and a graph of data can be created at the click of a mouse, there may be more room to engage with visual learners.
- **Workshops and events need a mix of styles.** For the kinaesthetic or activist learners, workshops may need to have considerable space for discussion, and for experiential engaging with the research. Policy makers attending may not wish to listen to presentations, but may wish to ask questions and engage in a debate of how the research applies to their situation. We know that it is good for researchers to engage with policymakers even during the formation of the research, but as intermediaries we often are presenting other people's research after its completion. How then could an environment be set up for the kinaesthetic and activist learners – are there role play games that might be introduced, or are there forums for debate that might engage them?

- **Culture is a big component.** There is more work to be done on cultural influences on research communication and intermediary work. We have realised that the intermediary sector needs to become at a minimum 'cultural detectives' i.e. to become aware of the possibilities of culture affecting communication, and in order to respond appropriately to Carden's insights below.
- **Upbringing can be a bigger component.** Many academics in higher education institutions initially adopt a teaching style that merges the ways they prefer to learn, and approaches to teaching they saw as effective in their own learning in their higher education programs. Some are unfamiliar with learning styles models and their potential to inform and enhance the learning processes or are uncomfortable experimenting with or utilising learning styles other than their own preference because it takes them out of their comfort zone (Hawk and Shah 2007).

We need to create space for more research on how the means for communicating research affects the uptake of that research. This would contribute more evidence in a non-educational setting on how learning styles affect policy and practice uptake.

Interestingly, learning styles suggest that it is up to the learner to determine their preferred learning style, not the educator. If we apply this to our intermediary work, then perhaps it is beholden on us to ask the people we are trying to influence what sort of information they would like and in what form. At a recent meeting with UK parliamentary researchers, a discussion about what they would like came out with a clear recommendation (for that group of people) of 'two sides, lots of graphics, and just the facts. Don't suggest the policy implications, that is for us to determine – just give us the facts – as visually as possible'.



Conclusions

The case studies and research on the influence of development research on public policy and action by Carden (2009) concluded:

‘There are no universal ‘best practices’ for influencing policy with research. Every circumstance is different. Every situation presents its own complications of need and choice, danger and advantage for researchers and for policymakers. For researchers, influencing policy begins by forming some understanding of these complications, and understanding of how they interact.’ (Carden 2009)

However, Carden instinctively commented on the variety of learning styles that adults have. He recommended that:

- Information needs to flow both ways. Researchers and policymakers need to engage in dialogue and to listen to each other’s choice of words and perspectives and then to craft research-based answers in similar terms, which will speed communication and influence.
- Communication needs to be continuous with overlapping channels and communication media. Individual briefs or workshops will have little lasting impact, especially where turnover in government offices runs high.
- Communication needs to be economical. Short papers, going straight to the policy issue, are more likely to be read and remembered than long papers in academic language.

To this we would add

- At times communication needs to be experiential, that policy makers need to see the outcomes of research for themselves – a site visit to the lab, the village, the farm, etc.
- Communication needs to take into account culture and socioeconomic factors. What are the accepted norms of learning in that culture? What are the protocols for who can teach?

Our bottom line? There is some value when presenting information in formats that target groups can access under their own initiative (i.e. a self learning context), in presenting information in a variety of formats, designed to meet a range of learning styles.

References and Further Reading

References for IDS Practice Paper In-Briefs are available via this link:

www.ids.ac.uk/research-teams/impact-and-learning-team/publications/bibliographical-resources

We will update the page as we become aware of new relevant publications.

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About the Impact and Learning Team (ILT)

What makes development research accessible, relevant or appropriate for people outside the research community? Does development research get its due in policymaking and practice? What would be value for money in research communication?

The Impact and Learning Team at IDS are interested in how communication of research brings about change - in particular, what happens when people and technology mediate between researchers and decision makers. We use the term 'intermediary' to describe people and technology acting in this way. We think they play a critical role in making knowledge accessible, relevant and responsive to demand.

The work we are doing in the Impact and Learning Team (ILT) is exploring and testing this assumption using action research. We support people to think about the difference they want to make as well as how they are going to go about it. We draw insights and approaches from IDS's history of research, and the fields of marketing, strategic planning and evaluation, and capacity development.

This Practice Paper is an output from our work.

Full list of papers in this set

Batchelor, S. (2011) 'Learning about analysing Networks to Support Development Work?', *IDS Practice Paper In Brief 1*, Brighton: IDS

Batchelor, S. Gregson, J and Crooks. (2011) 'Learning about an Alternative Approach to Strategic Discussions,' *IDS Practice Paper In Brief 2*, Brighton: IDS

Ishmael Perkins, N. and Okail, N. (2011) 'The Large Conference Re-Imagined and Re-visited,' *IDS Practice Paper In Brief 3*, Brighton: IDS

Evangelia, B. (2011) 'Learning About New Technologies and the Changing Evidence Base for Social Science Research and Decision Making in International Development,' *IDS Practice Paper In Brief 4*, Brighton: IDS

Hogan, C. (2011) 'Learning about the Role of Culture in Research Policy Intermediary Work,' *IDS Practice Paper In Brief 5*, Brighton: IDS

Batchelor, S. and Hogan, C. (2011) 'Learning about "Learning Styles" in Getting Research into Policy Use and Practice?', *IDS Practice Paper In Brief 6*, Brighton: IDS

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