

How to apply learning styles and a Whole Brain® approach to create effective learning

by Ann Herrmann-Nehdi

Learning with style

Everything we have learned about the brain, our behaviour and our modes of learning, requires that we assume difference in our learners! As the Talmud¹ states: "We do not see things as they are, we see things as we are." Our knowledge of the brain and its inherent uniqueness shows that each individual is a unique learner with learning experiences, preferences and avoidances that will be different from those of other learners. This means that learning designs must somehow factor in the uniqueness of the individual learner. An immediate implication for the education and training profession is that our assumptions about learning should take this into account; that our unique learning similarities and differences become part of the learning design and experience, and are made visible. As a result, learning is no longer one dimensional, but rather includes the notion of multiple intelligences, as Howard Gardner's² work has demonstrated. Then the subject matter is understood by all the participants, not just those that are in alignment with the design, delivery and teaching/training style or mode.

Consider Marianne whose unique learning style, a result of her mental preferences, led her to prefer a highly structured learning design including step-by-step instructions and built-in practice segments. Attending a program with a trainer who focused exclusively on providing a flexible discovery and who had a strong distaste for step-by-step approaches, Marianne was soon overheated with frustration, trying to figure out 'where they were' and she began checking out from the course. Has this ever happened to you? Experience with thousands of learners in workshops and programs clearly demonstrates that when such differences are made visible and are recognised by the

¹ The Talmud is a record of rabbinic discussions pertaining to Jewish law, ethics, customs and history. It is a central text of mainstream Judaism.
² Howard Gardner is an American author, psychologist and educator who is based at Harvard University. He is best known for his theory of multiple intelligences.

teacher/trainer and the designer, and then a whole-brained approach is used, it is highly beneficial to the individual learner and also to the entire learning group.

The concept of Whole Brain® Teaching and Learning is based upon our distribution of specialised modes throughout the brain system. The metaphoric model that has been developed from the initial EEG research at GE is divided into four separate quadrants, each one different and equal in importance. Most of the learning style models that exist today are divided into four quadrants. For the purposes of this paper, I will refer to the Herrmann Model, which has been highly validated over the last 30 years with over 2 million learners worldwide.

In the Whole Brain Model™, (see the diagram provided over the page), the two left quadrants (A and B) are specialised in left-mode thinking processes; logical, analytical, quantitative and fact-based modes in the Upper Left A quadrant; and the more planned, organised, detailed and sequential mode processed in the Lower Left B quadrant. In contrast, the two right quadrants make up right-mode specialisation; synthesising, integrating, holistic, and intuitive modes in the Upper Right D quadrant; and the interpersonal, emotional, kinesthetic and feeling modes associated with the Lower Right C quadrant. In addition, two of the quadrants represent more cognitive, intellectual modes (upper quadrants A and D). The other two quadrants (lower quadrants B and C) represent the more visceral, emotional modes.

If you think of each of these quadrants as four different people learning how to use a new computer, PDA or mobile device, imagine how each might approach the process. A-Albert would relish the technical aspects of the device, would be very comfortable with the mechanics and would approach the challenge quite logically. Ms B-Brigitte on the other hand would be ready and organised, expecting a process to follow and enjoying

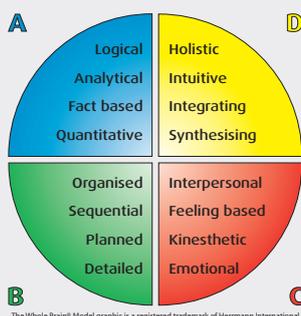
specific steps as they progressed—turn on the device, proceed through the set up wizard etc. Mr C-Carl would be thinking about the fun he will have, how he will be able to enjoy this to connect with his friends, and will often spend time talking out loud throughout the whole process, often preferring to do it with someone else. Ms D-Donna is looking at all of the cool features, trying them out spontaneously and not too worried about the set up procedures or instructions—she will figure that out later. Anyone trying to teach these individuals may have all four at any given time and certainly may prefer teaching one or more over the others. Fortunately, we are not limited to a one-quadrant perspective, but are in fact 'hard wired to be whole'. All of us have some degree of the four characters above available to us.

In fact, we all have connections that allow for direct interaction between these specialised areas, so we do have the bandwidth necessary to learn. Learning prompts interaction across this wiring. This also creates a sense

of discomfort when we don't know. I invite participants to try writing their name with their non-dominant hand. Try it! How does it feel? Responses often include uncomfortable, tiring, unpracticed, frustrating etc. This is a terrific example of what is happening when we are engaging the brain in an area that is different and unusual. Does some discomfort mean we should not pursue this? Absolutely not, but, you want to maintain the balance between boredom and anxiety. This balance provides the energy required to make new neuronal connections. With motivation, preparation time and practice, the new connections will form providing insight, a sense of accomplishment and that feeling of Aha! (which has actually been proven as a chemical reaction in the brain). The key message is not to 'cave in' to the style of the individual learners, but to plan around the challenges they present, learn the different languages they require and design a whole-brained, multi-modal experience. This will allow each learner to get what they need while stretching into the other, less preferred but available modes their brain provides them.

Whole Brain® Thinking

The highly validated Whole Brain Model™ is scientifically designed to help people learn to think better. Training that utilises Whole Brain Technology® focuses on showing people how to use their whole brain—not just the parts with which they feel most comfortable.



The HBDI® is based on the award winning research of Ned Herrmann who led the development and validation of the Whole Brain Model™ to describe how people think. More than a million people worldwide have taken the HBDI®, which is the assessment tool at the heart of Herrmann International's work with Fortune 500 companies and leading academic institutions.

The Herrmann Brain Dominance Instrument (HBDI®) evaluates and depicts the degree of preference individuals have for thinking in each of four brain quadrants:

Rational	Blue / A / Upper left
Practical	Green / B / Lower left
Feeling	Red / C / Lower right
Experimental	Yellow / D / Upper right

Research has shown that everyone is capable of flexing to less preferred thinking styles and learning the necessary skills to diagnose and adapt to the thinking preferences of others. Presenting information in a way that recognises, respects and is compatible with different preferences is crucial to meeting co-worker, customer and client needs and expectations.

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What does age have to do with it?

Much has been written in recent years about generational style differences. As you design your learning, keep in mind the age groups you will be reaching. The following tips for each group may be helpful to consider:

Veterans (born 1922-45)

- ◆ Give detailed directions
- ◆ Use clear language that is non-emotional
- ◆ Information must be organised and factual

Boomers (born 1945-65)

- ◆ Let them know how to make a difference
- ◆ Focus on the future and challenges
- ◆ Present options
- ◆ Allow them to learn
- ◆ Try to build consensus

Generation X (born 1965-80)

- ◆ Share information on a regular basis
- ◆ Be straightforward, but use an informal style
- ◆ Allow for flexibility

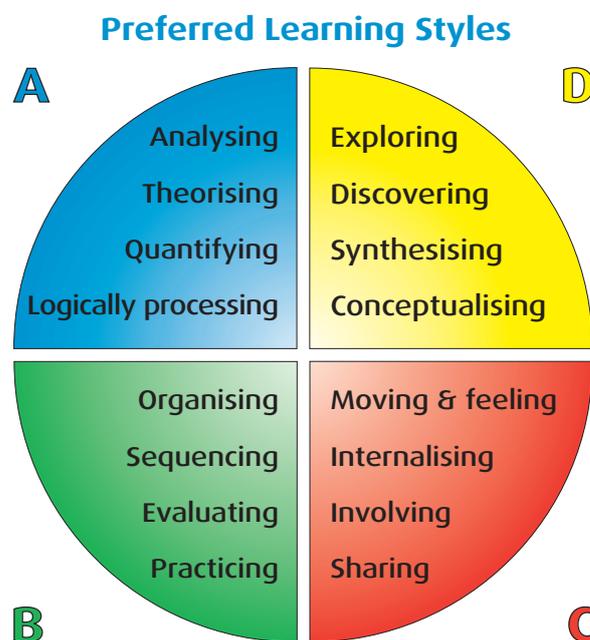
Generation Y (born 1980-2000)

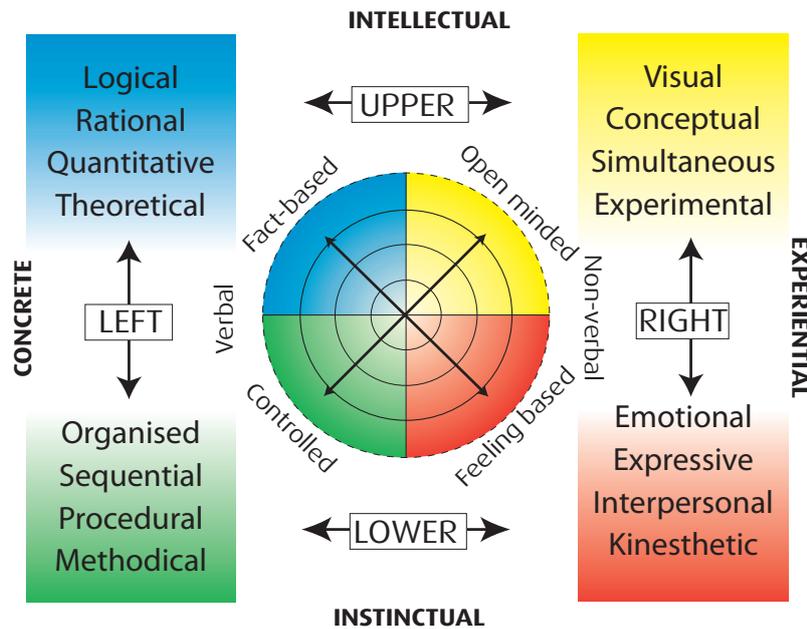
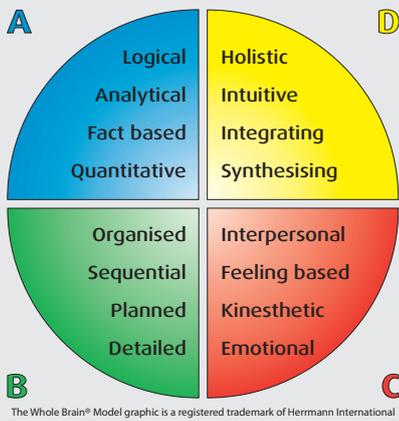
- ◆ Provide clear direction and share the whole story
- ◆ Discuss consequences
- ◆ Use humour
- ◆ Seek and provide regular feedback
- ◆ Use action words and challenge them at every opportunity

Learning a la mode

Most of us read at about 200-250 words per minute but think at speeds estimated of 350-500 words per minute. This is further complicated by the average speaking speed of 125 words per minute. This system design is set

up to lose our learners' attention at any given moment. In addition, our research has shown that your learner population will represent a very diverse group of learners. Using the HBDI® (Herrmann Brain Dominance Instrument®) with 2 million participants around the globe, we have learned that the world, taken as a whole, represents an equal distribution across the four quadrants. We have also learned that most individuals are not singular in their preference. The data substantiates that everyone has access to all four modes of thinking. Only 7% of the global population studied strongly prefers one mode over the others. Less than 3% are whole brained in their preferences, preferring all four quadrants more or less equally. The balance, 90% have dual or triple preferences across the model. We must plan for these differences! Most learning design is reflective of either the mental tilt of the content itself, or the preferences of the designer(s) or both. How about your learning designs and programs? Where are your learners? Look over the model below to identify which quadrants they fall into most frequently.

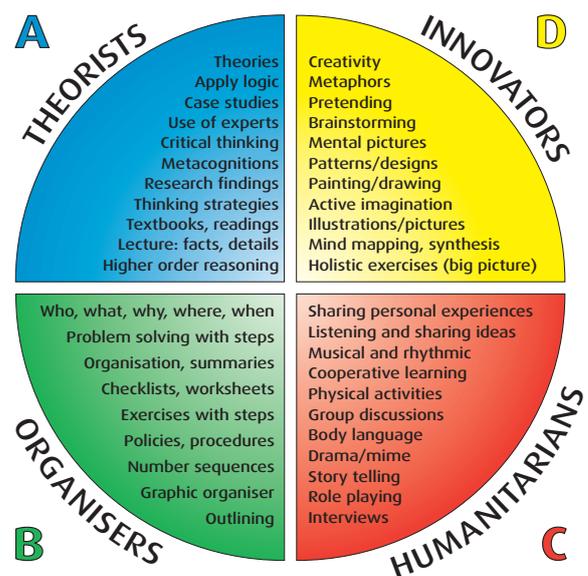




It is also useful to consider those students you think of as really 'smart'. We all have different 'smarts'—have you ever met someone who is socially dumb but quantitatively brilliant? Great at detail but lousy at innovation? There are 'smarts' all across the continuum as seen in the model provided.

Remember what it was like to be in a learning situation where you just didn't fit? It is pretty painful, and in today's world, learners do not have the patience or tolerance and will quickly check out. Stop and think about how you can be more effective in your design and delivery with those learners who do not fit your style. Start by looking at the programs you control and pick a learning program you think is really great. What styles does it appeal to most? Look over the Instructional Strategies Model™ opposite to find ways you can further stretch the design to be more inclusive of multiple styles. Next, think of resources you have available to you, colleagues or other professionals who can bolster your ability to best reach those learners. What resources, people, tools and activities can you use to make your learning more Whole Brained?

Instructional Strategies



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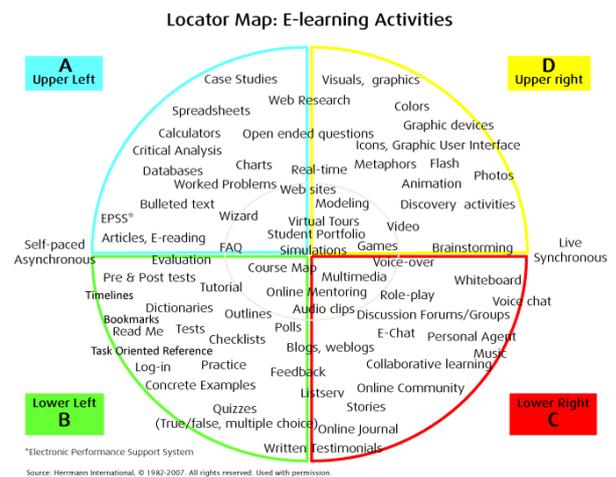
What about e-Learning?

An entire paper could be devoted to the topic of what you need to know about the learner in e-deliverables and programs. Learners can easily check out of e-designs that do not engage the brain. The good news is that more and more e-deliverables today are part of some blended solution and provide multiple options for learners.

One key consideration is the potential challenges based on generational styles, habits and comfort-levels. Veterans (born 1922-45) may be concerned about fraud, security issues and overly technical applications. Boomers (born 1945-65) may prefer traditional modes of learning, but are often open to technology based approaches once they have developed a level of comfort with them. Generation X (born 1965-80) is accustomed to using a wide variety of media. Millennials (born 1980-2000) prefer broad collaboration and expect e-deliverables. As we look at the brain and e-learning, there is much we will learn in coming years. Four important elements will help make your e-learning more brain friendly:

1. Human memory has two sources—pay attention to both visual and auditory inputs into memory but do not overdo it!
2. Only relevant, illustrative graphics really teach. Text and graphics need to be integrated and placed near each other to have full effect.
3. Use job context in your e-lessons to provide 'retrieval hooks'. New knowledge needs to be retrieved from long-term memory back on the job and setting up that context will help set that up mentally.
4. Learning is enhanced by challenge. Connecting with learners' emotions is critical to retention and learner engagement.

The graphic below shows e-learning activities that help to make your e-learning programs more whole brained.



The whole is more than the sum of the parts

Our experience and data proves that different design and delivery approaches improve and facilitate the learning experience, by tapping into each of the four specialised quadrants. As such, you need to provide options for the learner. This must be done thoughtfully so you do not overwhelm the learner by providing a deluge of modalities all streaming at them at once. Our preferences represent our 'default mode' but we often 'zig zag' around the model when we are learning, taking advantage of the array of processes we have available.

It is essential to consider the uniqueness of the learning group when designing programs, whether it is a classroom, coaching, e-learning, blended or any kind of format. With the use of the Whole Brain Model™ as a diagnostic tool, it is possible to better design the learning program to meet that unique requirement. In most instances you will not have access to information on your learners, or at best you will have a guess, unless you

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are using an assessment tool like the HBDI® (Herrmann Brain Dominance Instrument®) or others available in the marketplace. That means your most successful approach to your learning, design and delivery is to create a whole-brain experience for a whole-brain learning group. A recent trip to Disney reinforced that idea—the longest lines were for the experiences that were the most whole brained. Often the best websites appeal to different learning approaches in a very elegant way, not overwhelming the user.

I believe good learning design is like a tapestry of these modalities that weaves through the learning, making opportunities for the learner to:

1. understand how they learn
2. foresee and ramp up to what is coming (even if it is not in their preferred mode)
3. access what they need to continue the learning in a form they can learn from, if the first pass did not work for them
4. have an opportunity to practice and reinforce what they have learned in order to strengthen the wiring and move the knowledge into long-term memory.

This tapestry approach creates a design that moves back and forth with techniques and activities from each of the four quadrants. Each critical learning point needs to be paraphrased in each mode at some point in the learning process. Using a Whole Brain® approach in your design and delivery helps ensure that participants with different preferences and interests are able to learn effectively and consistently. Whether you are designing a learning point, module, workshop or an entire course, look for ways to speak to the learners in all the styles they may bring to the table. This can also be applied to help non-trainers and learning professionals in the organisation to better reach their colleagues and associates when rolling out an initiative in response to an organisational challenge.

Judy Strock, a trainer at a large computer manufacturer, used this approach as part of a roll-out of a new performance management system that was delivered by call centre managers. With some minimal investment, the managers were significantly more successful in getting the message across and encountered much less resistance to the proposed changes. Andrew Stagg at Bendigo Bank has used this approach to design their entire training curriculum with very positive results. So what can you do to more effectively apply what we know about the brain and our styles?

1. Recognise the consequences of your preferences on how you think, learn and teach.
2. Understand that your learning community will always represent a very diverse thinking and learning group, a composite whole brain.
3. Teach to the way the diverse, specialised brain likes and needs to learn, honouring the uniqueness of the learner's brain by learning to speak its multiple languages.
4. Take the opportunity to use learning styles and brain-based methods to design and deliver learning.
5. Remember that the learning environment and approach must not in anyway hinder or diminish the motivation of the learner or their passion for the subject at hand.
6. The proof exists that learning styles and brain based theories of teaching and learning do improve the effectiveness of our learning under the right conditions. Warning: learners should never feel like they are being trapped in one style or approach or put in a box.

What we know about the brain is that it can and will change. So for best results, use all styles regularly to ensure success!

Herrmann International Asia works with leading companies and academic institutions to improve employee and team performance.

About Herrmann International Asia

Herrmann International Asia works with leading companies and academic institutions to improve employee and team performance.

Herrmann's work focuses on practical ways to leverage differences in individual thinking styles. Building on research originally begun at General Electric, the company has developed applications that range from developing strategy at the executive level to increasing sales force productivity.

More than a million people have completed the Herrmann Brain Dominance Instrument (HBDI), the assessment tool at the heart of the company's approach. Herrmann International Asia is headquartered in Sydney, Australia with offices in:

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- ◆ Melbourne
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The Originators of Whole Brain Technology® and the Creators of the Herrmann Brain Dominance Instrument® (HBDI®)

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