Thinking and Learning Agility: 10 Steps to Maximizing Learning Outcomes

Ann Herrmann-Nehdi
Sept 3rd, 1967, the day Sweden changed from driving on left to right
10 Steps to Maximizing Learning Outcomes:

1. …
2. …
3. …
4. …
5. …
6. …
7. …
8. …
9. …
10. …
- 1-3: Design with the Brain in Mind

- 4-7: Engagement is the Name of the Game

- 8-9: Be Agile

- 10: Apply, Apply, Apply
Provide your card for our drawing!

Trifold

4 balloons

4 color cards

Handout + poster
Can you find the mistake?

1 2 3 4 5 6 7 8 9
Can you find the mistake?
Describe to one or 2 partners how it makes you feel when you are truly engaged at work...
Add these numbers:

$$
\begin{array}{c}
345.0 \\
1234.0 \\
34.0 \\
+ 29.7 \\
\hline
1642.7 \\
\end{array}
$$
better results through better thinking
Agility

- Strategy execution
- Career growth and maturity
- Research and development
- Individual and team performance

Focused on following steps for effective planning and execution

- Key performance indicators
- Project delivery
- Reputation
- Top line revenue
- Customer retention
- Operational efficiencies
- Project implementation
- Employee engagement
- Creative solutions

Quality and process improvement

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What is happening in your world that requires you and your learners to be more agile?
- Volatile
- Uncertain
- Complex
- Ambiguous
The world we have created is a product of our thinking; it cannot be changed without changing our thinking.

Albert Einstein
Ultimately, our ability to continuously learn and adapt will determine the extent to which we thrive in today’s turbulent times.
Thinking/Learning Agility: The ability to consciously shift your thinking and learning when and how the situation requires it.
“First-rate intelligence: the ability to hold two opposed ideas in the mind at the same time, and still retain the ability to function.”

F. Scott Fitzgerald
How agile is your Learning and Development organization?
“If you are in education, you are in the business of brain development. If you are leading a modern corporation... you need to know how brains work.”

— Dr. John Medina
Design with the Brain in Mind

1. Know what the brain needs for agility!
2. Patterns matter.
3. All learners are different.
1. Know what the brain needs for agility!

Visuals, breaks, activity and rested brains boost learning.

http://www.flickr.com/photos/cblue98/7254347346/
Over 80 percent of all information that is absorbed by the brain is visual in nature.

Optimal Environments

Oral info alone: You remember 10% after 72 hours...

Brain Rules
How many of you are sleep deprived?

Sleep = better thinking and learning

Memories are restructured in the first four hours of the sleep cycle, enhancing memory and creativity.

Jan Born
University of Luebeck, Germany
Nature, January 2004
Break it up!
The brain needs time to process!

Taking a break after class / learning helps retain the information just learned.
Exercise makes learners smarter.
Encourage movement or physical activities, especially right before demanding processing is required.
1. Know what the brain needs!

1. Integrate visuals, breaks and physical activity and design with sleep in mind to boost learning.

http://www.flickr.com/photos/cblue98/7254347346/
Your brain craves patterns and searches for them endlessly.
Thomas Czerner 2001

2. Patterns matter!
QUIT STEALING
OR LETTERS$
GOOD TIMES ARE HERE
The brain is subject to “unintentional blindness”
Good news!
Learning changes learners' brains.
Old dogs can learn new tricks.
2. Patterns matter!

Agility requires the creation of NEW patterns to break the TRAP.

Create completely new connections using novelty.
Every brain is wired differently.

3. All learners are different. To become agile, you need to know how they learn as a starting point.

RIGHT BRAIN DOMINANCE

RUSTY

J. Harris
The Whole Brain® Thinking Model

A Metaphor:

- Logic
- Statistics
  \[ A + B = C \]

- Vision
- Risk

- Movement
The Whole Brain® Thinking Model

LOGICAL
ANALYTICAL
FACT-BASED
QUANTITATIVE

HOLISTIC
INTUITIVE
INTEGRATING
SYNTHESIZING

ORGANIZED
SEQUENTIAL
PLANNED
DETAILED

INTERPERSONAL
FEELING-BASED
KINESTHETIC
EMOTIONAL

A Upper Left

B Lower Left

C Lower Right

D Upper Right
HBDI® Profile - ALL access all four quadrants!

- **LOGICAL**
  - FACT-BASED
  - ORGANIZED
  - PLANNED
  - DETAILED

- **ANALYTICAL**
  - QUANTITATIVE
  - SEQUENTIAL
  - PLANNED
  - DETAILED

- **HOLISTIC**
  - INTEGRATING
  - SYNTHESIZING
  - FEELING-BASED
  - EMOTIONAL

- **INTUITIVE**
  - INTEGRATING
  - SYNTHESIZING
  - FEELING-BASED
  - EMOTIONAL

- **KINESTHETIC**
  - FEELING-BASED
  - EMOTIONAL
  - KINESTHETIC
  - EMOTIONAL

- **INTERPERSONAL**
  - FEELING-BASED
  - EMOTIONAL
  - KINESTHETIC
  - EMOTIONAL
Preferred Learning Styles

Where are you?

Quantifying
Analyzing
Theorizing
Logically processing

Exploring
Discovering
Conceptualizing
Synthesizing

Organizing
Sequencing
Evaluating
Practicing

Sharing
Internalizing
Moving & Feeling
Involving

INTEREST
MOTIVATION
PASSION

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Should we be using learning styles?
What research has to say to practice

Learning style instruments are widely used. But are they reliable and valid? Do they have an impact on pedagogy? This report examines 13 models of learning style and concludes that it matters fundamentally which model is chosen. Positive recommendations are made for students, teachers and trainers, managers, researchers and inspectors.
Think back to a class you hated…

Tooth Morphology 101
Case example: Tooth Morphology

A significant improvement in students’:

• Retention
• Participation
• Attitude

GRADE INCREASE:
From 60-70% to 97%
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A

- Quantifying
- Analyzing
- Theorizing
- Logically processing
In God We Trust...
All Others Must Have DATA!
- Organizing
- Sequencing
- Evaluating
- Practicing
JAZZ PIANO LESSONS
STEP-BY-STEP APPROACH TO IMPROVIZATION

ALEX DAMIEN  247-8125
• Sharing
• Internalizing
• Moving & Feeling
• Involving
For the last time Crawford, our curriculum is developmental & engaging, not ‘touchy-feely’.
• Exploring
• Discovering
• Conceptualizing
• Synthesizing
The Whole Brain® Teaching & Learning Model

A
Logical
Rational
Quantitative
Theoretical

B
Organized
Sequential
Procedural
Methodical

C
Emotional
Expressive
Interpersonal
Kinesthetic

D
Visual
Conceptual
Simultaneous
Experimental

Where are your learning designs?
Preferred Learning Styles

Quantifying
Analyzing
Theorizing
Logically processing

Exploring
Discovering
Conceptualizing
Synthesizing

Organizing
Sequencing
Evaluating
Practicing

Sharing
Internalizing
Moving & Feeling
Involving

Where are your learners?

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LEARNER EXPECTS
- Precise, to the point, information
- Theory & logical rationales
- Proof of validity
- Research references
- Textbook reading
- Quantifiable numbers, data sets, problems
- Opportunity to ask challenging questions
- Subject matters expertise

LEARNER STRUGGLES WITH
- Expressing emotions
- Lack of logic
- Vague, imprecise concepts or ideas

LEARNER EXPECTS
- Fun and spontaneity
- Playful, surprising approaches
- Pictures, metaphors, overviews
- Discovering of the content
- Freedom to explore
- Quick pace and variety in format
- Opportunity to experiment
- New ideas & concepts

LEARNER STRUGGLES WITH
- Time management and deadlines
- Administration and details
- Lack of flexibility

LEARNER EXPECTS
- An organized consistent approach
- Staying on track, on time
- Complete subject chunks
- A beginning, middle and end
- Opportunity to practice & evaluate
- Practical applications
- Examples
- Clear instructions/expectations

LEARNER STRUGGLES WITH
- Risk
- Ambiguity
- Unclear expectations/directions

Honor Learner Expectations
Every brain is wired differently.

3. Plan for style difference and know your learners! There are implications for you as a designer, trainer, educator.
Engagement is the Name of the Game

4. Context matters!
5. The digital brain is changing the way we learn.
6. Go social.
4. Context matters!
better results through better thinking
Be wary of assumptions...
5. The digital brain is changing the way we learn. Engagement is more critical than EVER... Learners get easily bored, distracted and are stressed out.
Digital Natives vs. Digital Immigrants

**Digital Native Learners**
- Info……….. • Quick simultaneous vs. Controlled, structure
- Sources….. • Multiple vs. Fewer
- Processing. • Parallel vs. One at a time
- Like.......... • Multitasking vs. Focus
- Text.......... • Pics, sound, video vs. Text first, others last
- Access....... • Random hyperlinks vs. Logical and linear
- Enjoys........ • Interaction w/others vs. Individual
- Teaching..... • Just in time vs. Just in case
- Gratification. • Instant vs. Deferred
- Approach…. • Relevant, instantly useful and fun vs. “serious business”

**Digital “Immigrant” Trainers**
"We shape our tools and then our tools shape us."

Marshal McLuhan
Partial Attention

Task Switching:
- 50% longer to accomplish the task
- 50% more errors
HONK IF YOU LOVE JESUS TEXT
WHILE DRIVING IF YOU WANT TO MEET HIM

SUN. SCHOOL 10:00 AM
SUN. WORSHIP 11:00 AM & 6:00 PM
WED. 7:00 PM

Pastor Floyd Ingram
MULTI-TASKING Is here to stay!
Just doing a spot check to see what you are doing
5. The digital brain is changing the way we learn - change it up every...

10 Minutes

8 Minutes

4 Minutes (online)!
We are wired to be social.

5. So go social.
How many of you use social learning?

5. Integrate social learning & social interaction, online collaboration, mentoring, buddy/pairs, group work etc.

Jane Hart www.c4lpt.co.uk
Sydney Bridge Climb
Too Much Stress Alters Neuron Growth

Healthy

Too Much Stress Alters Neuron Growth


Stressed
Stress is not ALL bad....

Best Performance

High

Performance

Low

Low

Pressure

Optimum Stress

Bored  Calm  Focused  Tired  Anxious
Engage Emotions Positively for Better Learning

1) Expression
2) Physical, hands-on, kinesthetic activities
3) High stakes, complex activities
4) Novelty
5) Interaction with others

Teaching with the Brain in Mind
Eric Jensen
Engagement is the Name of the Game

4. Context matters! Always cover it FIRST!
5. The digital brain is changing learning—Change it up every 4-8 minutes.
6. Go social. Use the new tools in a blend.
Be Agile

8. Become “bilingual.”
9. Strengthen the agility of your team.
8. Become “bilingual”!

“The bilingual brain reflects humans' abilities for flexible thinking.”
Getting an ROI® on your ROI Process: An Intro to the Human Capital Analytics...

The Secrets of Facilitation

Making the Best of your LMS: Best Practices for Implementation

Developing Creative Global Leaders
Communication
better results through better thinking
better results through better thinking
Whole Brain® Communication

A
- Critical analysis
  - Facts - No fluff
  - Technical accuracy
  - Goals and objectives
  - Well articulated ideas
  - Data - Fact based charts
  - Brief, clear, precise info

B
- Detail time-action plan
  - Thorough w/references
  - Rules and procedures
  - Step by step - Concise
  - In writing in advance
  - Contingency plans
  - No digressing

C
- Open, informal discussion
  - Expressive body & voice
  - Intros and conversation
  - Knows effect on others
  - Know how people feel
  - Hear & understand all
  - No hidden agendas

D
- Minimal details
  - Freedom to explore
  - Metaphors - Visuals
  - Overview - Big picture
  - New, fun, imaginative
  - Conceptual framework
  - Aligns w/ long term strategy

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Apply, Apply, Apply

10. Use a Whole Brain® approach to design and delivery for greater agility (you, your learners, your team.)
WHOLE BRAIN THINKING

{Ignore It at Your Peril}

By Ann Herrmann-Neuhäusler

Whole brain thinking has everything to do with employee performance. Think about how your customers' brains learn when designing learning and performance programs.

Thirty years ago, a high-potential manager in a training class at General Electric's corporate university listened as my father, Ned Herrmann, then head of GE's management education, discussed research he was developing on how the brain affects day-to-day operations.

Struggling to find relevance, the manager remarked, "Learning about the brain is certainly interesting, but Ned, what does the brain have to do with managing?"

"Everything," Herrmann replied.
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better results through better thinking
It’s not what is taught that matters, it is what is caught by the learner.

Louis Phillips
Instructional Strategies For Improved Learning Design

A
- Facts, mini lectures
- Web based research and fact finding
- Databases, spreadsheets
- Research findings
- Higher order reasoning
- Critical thinking
- References, readings
- Case studies
- Use of experts
- Applied logic
- Metacognition (thinking about thinking)
- Theories
- Technical approaches
- EPSS (Electronic Performance Support Systems)

B
- Pre & post tests
- Quizzes
- Practice
- Checklists, timelines, outlines
- Sequenced learning
- Procedures, processes
- Organization, summaries
- Who, what, why, when, where
- Exercises with steps
- Structured problem solving
- Clear examples, case studies
- References, dictionaries
- Tutorials, FAQ

C
- Cooperative & team learning
- Group discussions, forums, Blogs
- Social : Chat, IM-ing, Twitter etc
- Role playing
- Drama
- Expression (verbal and body language)
- Sharing personal experiences
- Listening and sharing ideas
- Storytelling, blog writing
- Auditory, musical & rhythm
- Physical, kinesthetic activities
- Interviews
- Community/Cohort interaction

D
- Brainstorming, idea generation
- Discovery learning
- Metaphors
- Active imagination
- Creativity, invention
- Illustrations, pictures, photos
- Simulations, games, apps
- Mind mapping
- Synthesis
- Holistic exercises
- Storyboarding
- Visualization, mental pictures
- Simulation, modeling
Check off items you find challenging to use or do not use frequently:
Whole Brain® Design Preparation Checklist:

A
- Analysis of learning needs
- Facts about participants
- Appropriate use of numbers
- Verbal, articulate delivery available
- Factual accuracy of content
- Logical, functional flow
- Objectives
- Relevant content, data
- Technology Platform(s) tested

B
- Delivery logistics verification
- Timing verified
- Equipment requirements: trainer, learner
- Organization of learning materials
- Production of materials
- Program administration
- Sequencing of learning points
- Online/Site arrangements
- Pre and post surveys/ evaluations

C
- Design integration
- Humor
- Overall design elements
- Evocative language content
- Metaphoric content
- Visual content: graphics, photos
- Musical input
- Emotional content of material
- Kinesthetic and tactile considerations
- Provision for interaction/involvement
- Learner comfort and ease of access
- Pairings, groupings for activities
- Communication with learners/trainers

D
- Learner preference assessment
- Auditory content
- Breaks and free-time planning
- Engagement of learners
- Emotional content of material
- Provision for interaction/involvement
- Learner comfort and ease of access
- Pairings, groupings for activities
- Communication with learners/trainers
Safety Is A Whole Brain® State Of Mind

WHAT FOR?
WHAT IF?
HOW?
WHO?
Product Design Process and Alignment

Design process went from 24 to 14 months. Most Whole Brained game = most popular.
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What will you do as a result of today's session?

1. WHAT goals and business outcomes are you focused on (list all that apply)?

2. WHY is this relevant for the strategic needs of the organization?

3. WHO is/are your customer(s)? Who will you need to engage, support and ask for help?

4. HOW, WHEN and what resources do you need to develop a plan to execute and measure your outcomes?
• Volatility
• Uncertainty
• Complexity
• Ambiguity

• Versatility
• Understanding
• Clarity
• Agility
“I use not only all the brains I have, but all I can borrow.”

Woodrow Wilson
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For a copy of the handout, articles and resources:

This session is repeated Wednesday at 1:15pm Ballroom D3 W314

Go To: http://go.herrmannsolutions.com/astd2013agilitysession or write to info@hbdi.com

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