



Professional Development Webinar

(Term 1, 2016)

Student Attention: Measuring and Managing

SCHUHFRIED

passion for psychology



Attention

Measuring & Managing

What we attend to, we become...

What is relevant

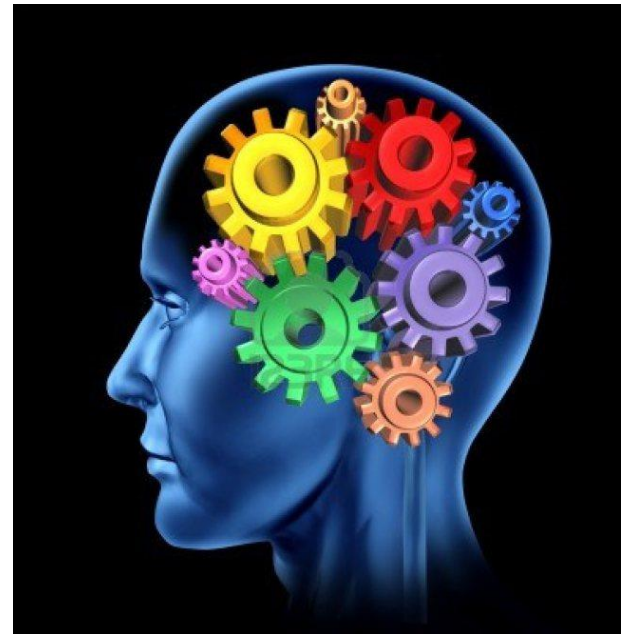
What is ignored

**What is likely to
be remembered**

Attention

- **Complex and multi-dimensional ability**
- **Cognitive functioning involves attention**
- **Higher order thinking**

33%



Research on Attention

Attention

Alertness • Selective • Focused • Divided
Executive control • Attention span

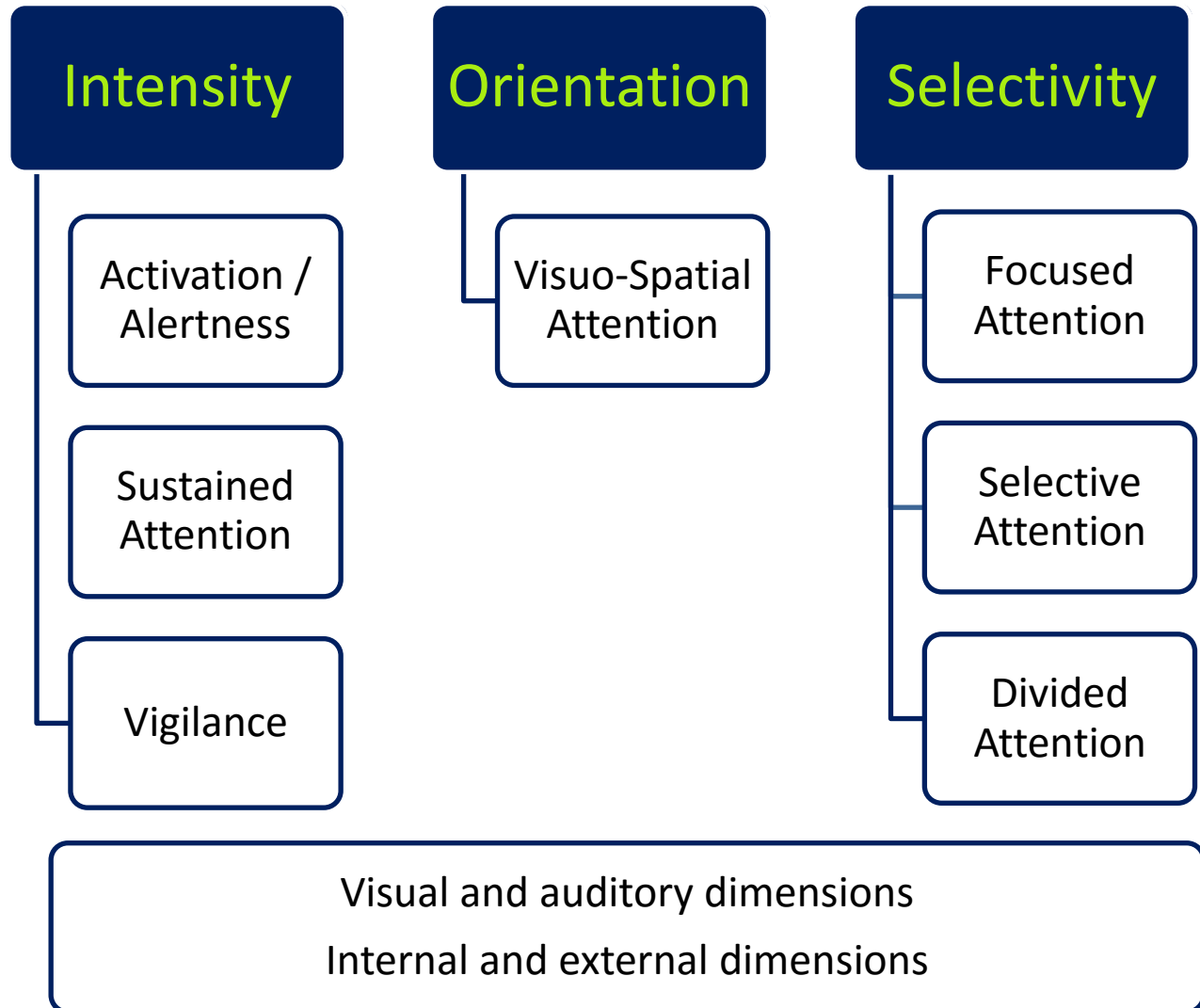
Education

Attention affects learning
Foundational ability
Poor performance
Academic achievement
Predictor of success

Overall

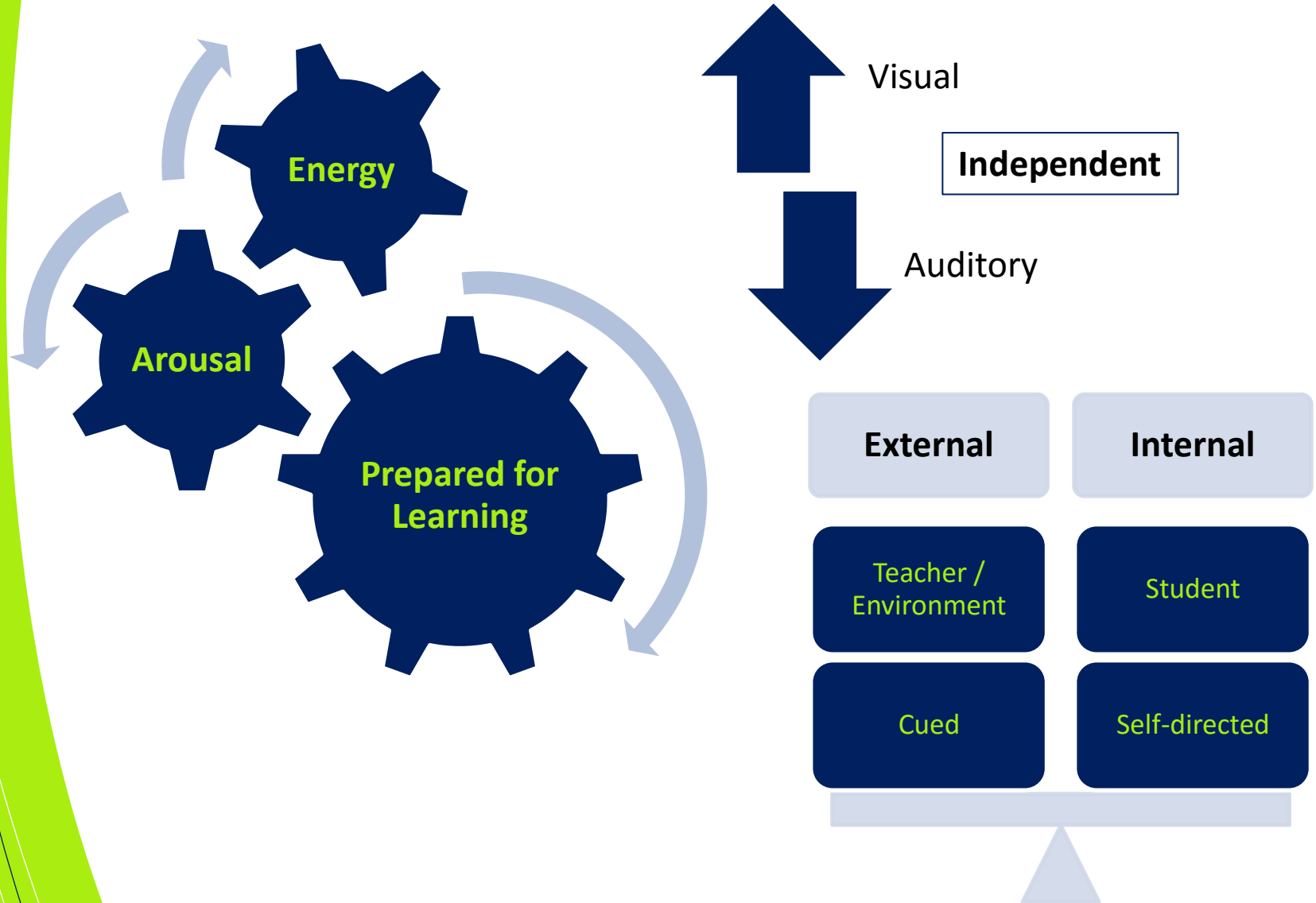
Single pointed focus
Mistakes occur
Multi-tasking – Questioned?
Rapid task switching – Yes!

Areas of Attention



Alertness

Activation, readiness, short-term



Alertness

Activation, readiness, short-term

Students with poor alertness

- Slower to respond
- Take longer to process information
- May look tired or restless
- Require visual or auditory cues
- Appear to possess a poor memory

Teaching for alertness

Principle

- Identify the intensity and energy required to perform the task

Action Areas

1. Watch out for alertness issues
2. Think about the level of energy for different learning tasks
3. Raise energy levels through a range of audio-visual techniques
4. Settle energy levels through pace, mindfulness and mediation methods
5. Remember that some students can self-generate alertness

Sustained Attention

Perseverance, longer periods and low stimulus

Sustained Attention

As a **cognitive ability** as opposed to skill (how to pay attention) or will (want to pay attention)

Maintain effort

Keep up intensity

Sustain attention

Important for long, repetitious, monotonous, tedious, or boring tasks

Sustained Attention

Perseverance, longer periods and low stimulus

Students with poor sustained attention

- Frequently distracted when faced with the same task.
- Miss information
- Find it harder to refocus
- Require more task variety
- Bounce from one task to another

Teaching for sustained attention

Principles

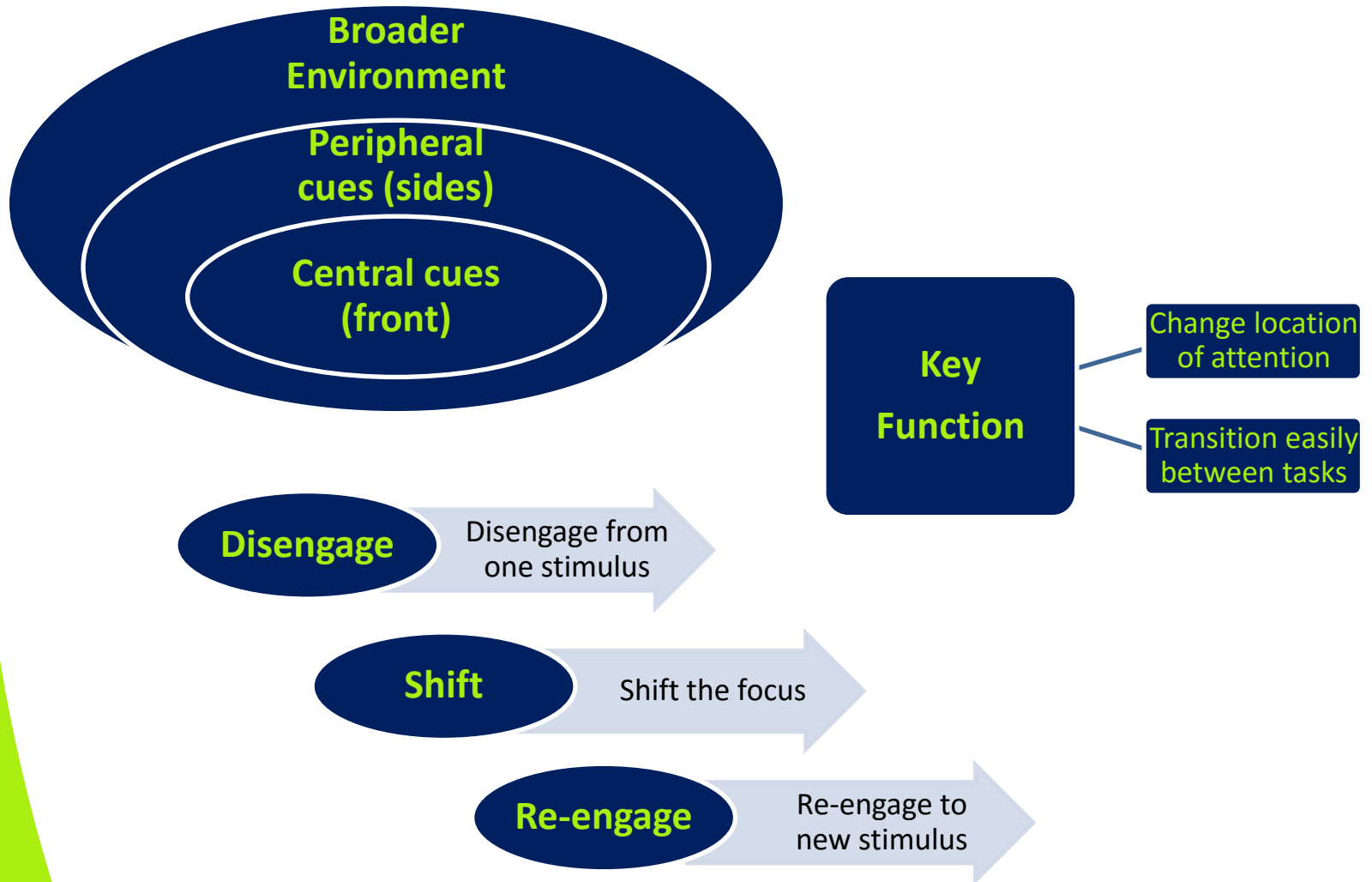
- Work with the knowledge that this form attention will vary throughout the day
- Maintain consistency of engagement

Action Areas

1. Help students build sustained attention strength
2. Identify the average attention span within a student
3. Vary the delivery medium for instructions

Visuo-Spatial Attention

Orienting and shifting attention



Visuo-Spatial Attention

Orienting and shifting attention

Students poor in this ability

- Find it difficult to shift their focus between objects
- Can be confused when trying to sequence and capture information
- Need multiple cues
- Struggle in sporting activities which require continuous shifting attention

Teaching for visuo-spatial attention

Principle

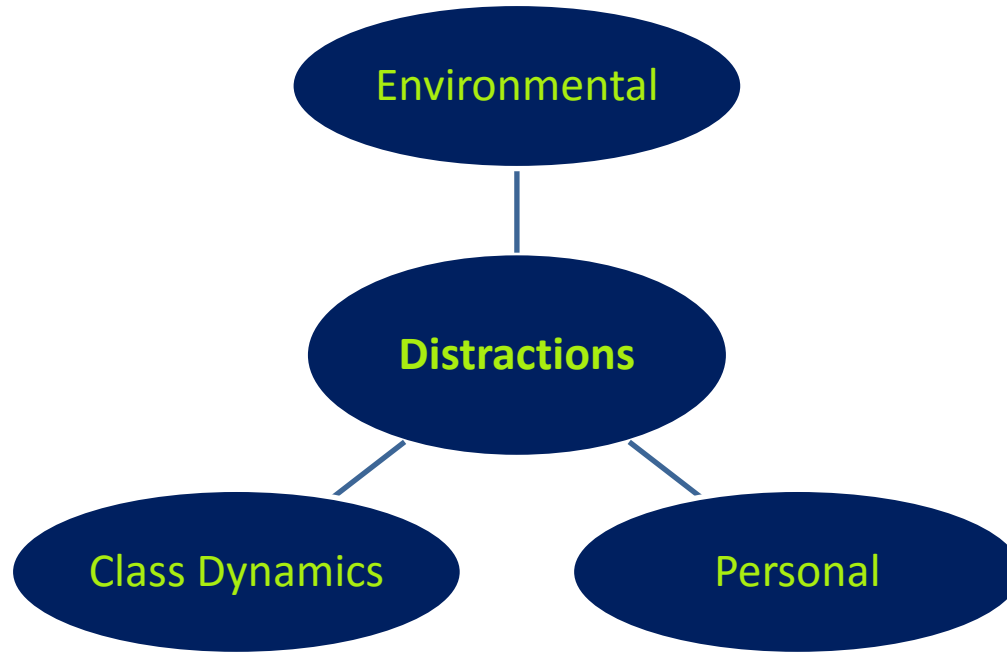
- Orient student's visual focus of attention to relevant tasks

Action Areas

1. Help students to disengage their attention away from the previous task
2. Use visual transition management
3. Observe the capacity of students to redirect their own visual attention
4. Try location messaging to anchor students' perception of the next task.

Focused Attention

Audio-visual interaction and competing distractions



Focused Attention Ability

- Deal with distractibility in a learning environment
- Cope with quick-paced learning
- Easily ignore “#\$@%” in order to stay task-focused

Focused Attention

Audio-visual interaction and competing distractions

Students poor in this ability

- Bounce from distraction to distraction
- Take fragmented notes that lack structure
- Have difficulty reading or completing a test when there is noise
- Look busy and physical active but not focused
- Have their mind wander off-task

Teaching for focused attention

Principles

- Find a way to support students who are distracted by external events or internal thoughts
- Identify the source/sources of distraction (internal or external)

Action Areas

1. Conduct regular mindfulness exercises
2. Restructure the classroom layout
3. Evaluate the source of distractions and adjust teaching approach
4. Provide frequent and effective feedback on the process of learning

Selective Attention

Relevant vs similar but irrelevant information and tasks

Focus on the
PARTICULAR

At the
same time

Simultaneously
ignore **IRRELEVANT**
information

Selection Attention is a
very important ability

Too many things
going on around us

Attention is limited
& fatigues quickly

Tune out
unimportant details

Focus on what really
matters

Selective Attention

Relevant vs similar but irrelevant information and tasks

Students poor in this ability

- Lose track on one task when information presented by the teacher
- Work on tasks out of sequence
- Miss critical information

Teaching for selective attention

Principles

- Support students to distinguish between relevant and irrelevant visual and auditory tasks
- Specify relevancy of information or where the attention should be channelled

Action Areas

1. Give attentional cues, visually or vocally, throughout learning material
2. Use inflections and volume when delivering the key information to help differentiate standard from critical information.
3. Create more opportunities and allocate time to summarise information

Divided Attention

Multiple sources of data, task switching, and evaluating priority

Most complex area of attention

- Higher order area of attention

Helps us process multiple sources of information

- Ability to scan multiple streams of data (almost) simultaneously

Allows task switching

- Deal with relevant but competing information

Respond to many tasks or demands

- Urgency and priority criteria

Divided Attention

Multiple sources of data, task switching, and evaluating priority

Students poor in this ability

- Struggle to rapidly sequence tasks
- Have trouble listening when they are already engaged in a task
- Ignore additional critical cues
- Struggle to synthesise information from the teacher while writing it down
- Not adequately monitor themselves during learning

Teaching for divided attention

Principle

- Reduce task switching and attending to too many different tasks simultaneously

Action Areas

1. Allow students to complete a task before moving on to another
2. When teaching, give students the time process the key themes before moving on
3. You can successfully load up students with multiple tasks if the tasks are simple, familiar, sequenced rather than batched together
4. Help students prioritise the sequence of tasks or information

Key Points!

Limited Resource

- Attentional capacity is **limited**
- Don't **overload** (complexity, place and volume)

Streaming Information

- Centrally focus on **single** stream of data
- Discourage **multi-tasking**

Teach to attentional capacity

- **Low alertness** >> Energy, over-arousal
- **Weak focused attention** >> Manage distractions, internal distractions
- **Poor selective attention** >> Clear cues & tips, pauses & summaries
- **Inadequate divided attention** >> Reduce parallel information, sequence more

Develop attention directly

- Specific **cognitive** development program

A photograph of a classroom where several young students are seated at desks, each with a computer monitor. They appear to be engaged in a learning activity. In the background, a teacher is standing and observing the students. The image is overlaid with a bright green decorative shape on the left side.

Managing Attention

The practice of note taking during a lecture can be a distraction that can limit our students' ability to learn. How could note taking be better managed?

Free Resources

1. Webinars www.neuromite.com.au/webinars

- Professional Development
- NEUROMITE programs

2. NEUROMITE web site www.neuromite.com.au

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