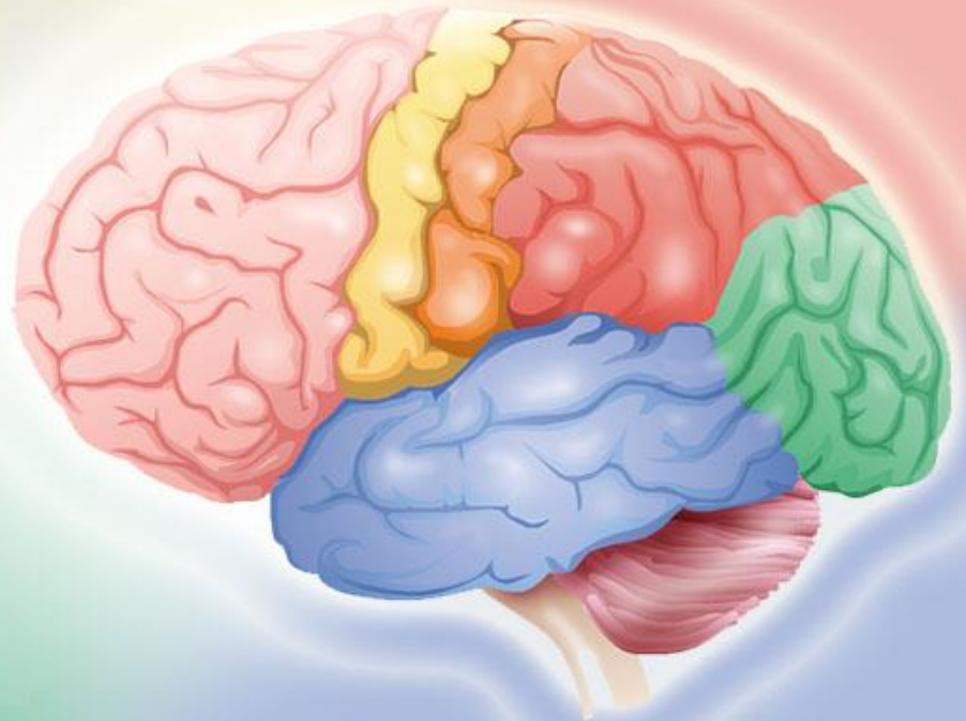


Learning Neuro-anatomy The Occupational Therapy Way!





1 Introduction

2 Active Learning Theory

3 Workshop

4 Evaluation

Active Learning



- A strategy and methodology based on teaching as learning facilitation (Kane 2004).
- Active learning is a recognised approach to enhance learner engagement (Machemer & Crawford 2007).

The Activity



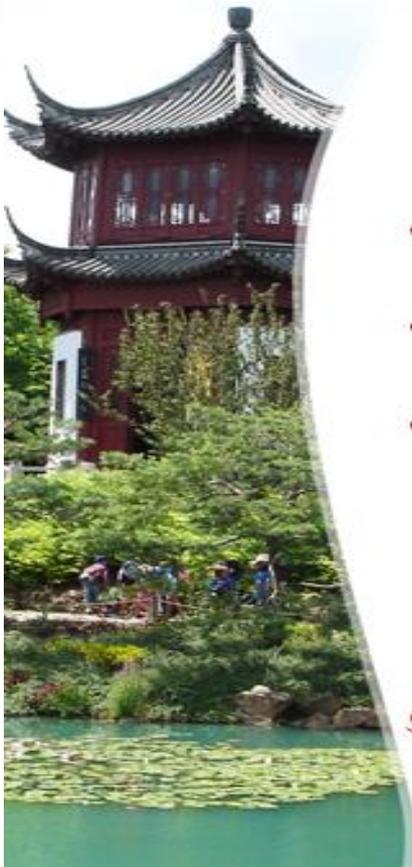
- Active learning strategies involve Learners experiencing the learning content in a multiple modalities
- (Cherney 2008).

Neuroplasticity



- *‘Learning is strengthened not only in relation to how many neurons fire in a neural network, but also by how they are distributed across different domains, such as the motor & sensory cortices’*
(Alexander 2010- Cambridge Report)
- Activities develop the frequency of the synapses in the brain
(John Hall 2005)

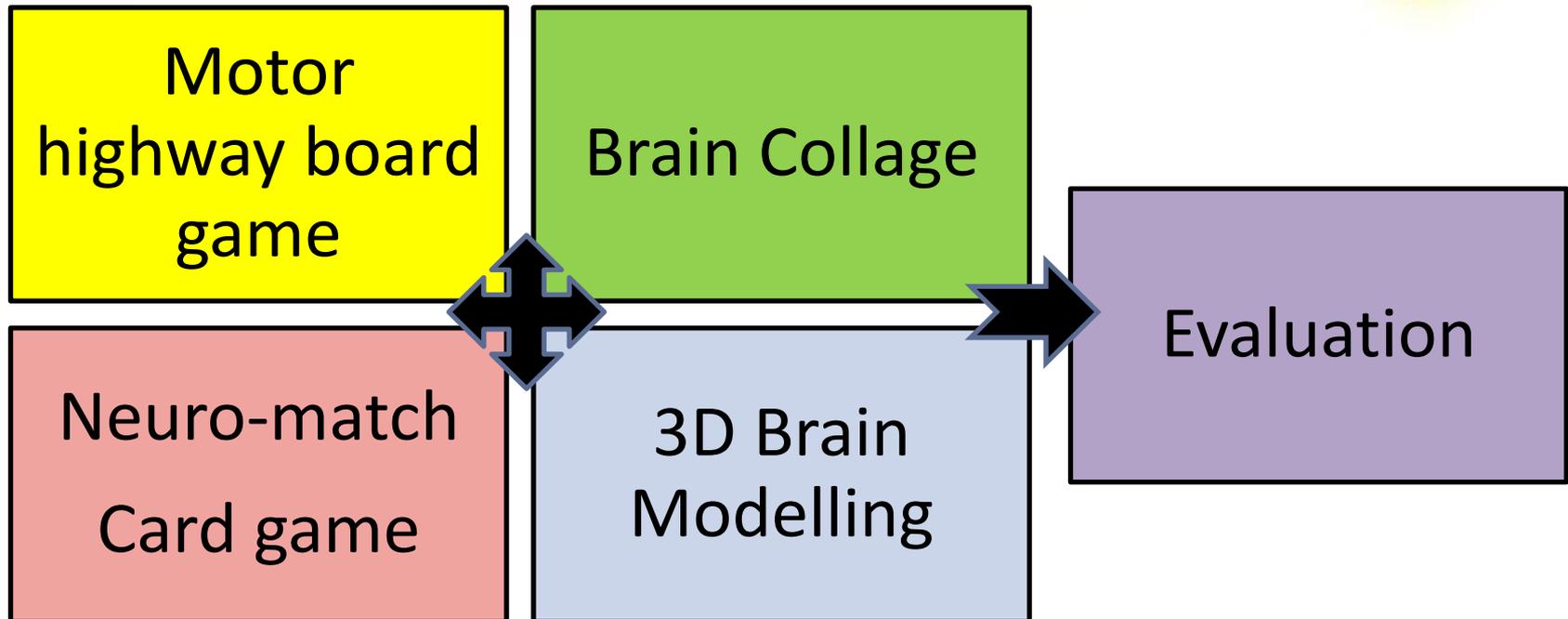
The Value of Engagement



- *Tell me and I'll forget,*
- *Show me and I may remember,*
- *Involve me and I'll understand.*

Chinese Proverb

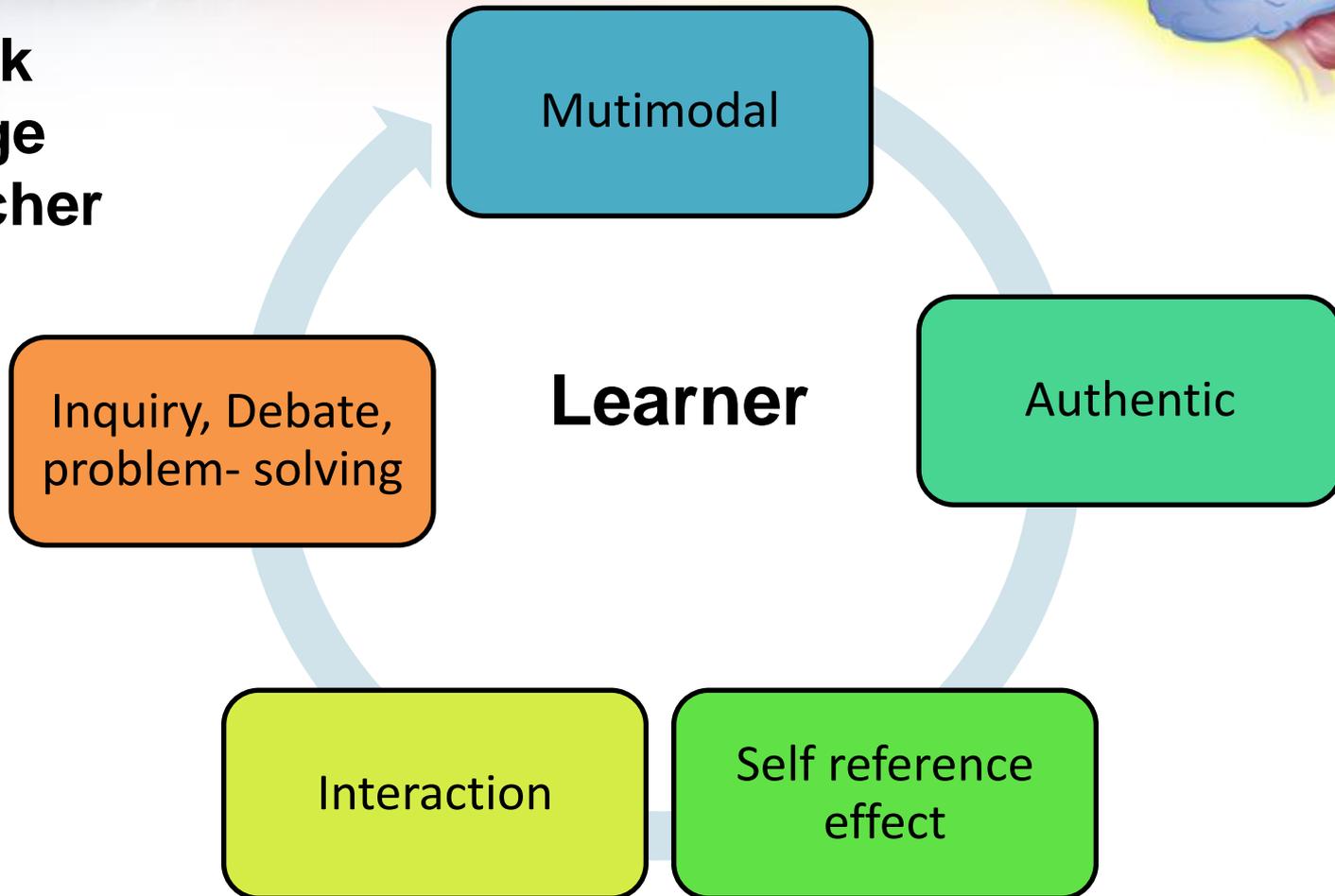
Workshop details



Active learning Task needs to be:



**Back
stage
teacher**



Social Interactions and the development of thought



- learners work together to solve a problem- by co-ordinating their actions, they arrive at cognitive solutions that neither of them are able to reach alone.
- Cognitive tools that are first constructed jointly to solve problems in a social situation, then become part of a persons own methods.



'Back Stage' Teacher



- Allow the learners to learn for themselves will give greater meaning & understanding.
- The organisation needs to come from the learners themselves.
- Piaget



Constructivism



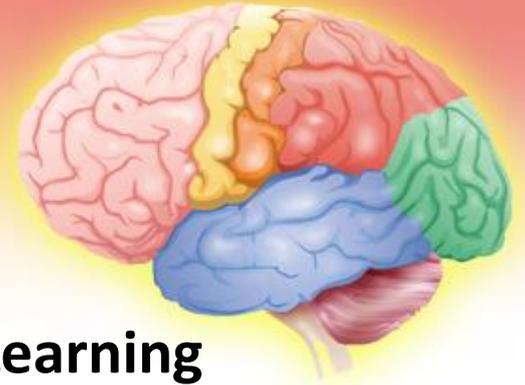
- Active learning strategies require constructivist approaches to knowledge processing. This includes independent inquiry, and structuring and restructuring of knowledge.

(Hart et al 2004)

(Monk & Silman 2011)



Activities



Active Learning

- **Drama**
- **Drawing**
- **Video**
- **Construction**
- **Group work**
- **Presentations**

Traditional Learning

- **Lecture**
- **E-lecture**
- **Workshops**

How to relate this to Neuroanatomy



- ***Ensure that this is related to practice***
- ***Relate to OT process***
- ***Relate to students on a personal level***
- ***Ensure tasks can allow students to place their own stamp, on the learning experience***
- ***Social interaction***
- ***Introduce team working, problem-solving***

Welcome to the Brain Dig



- <https://www.youtube.com/watch?v=ncCoRg7Aj9Q&feature=youtu.be>

Msc Module



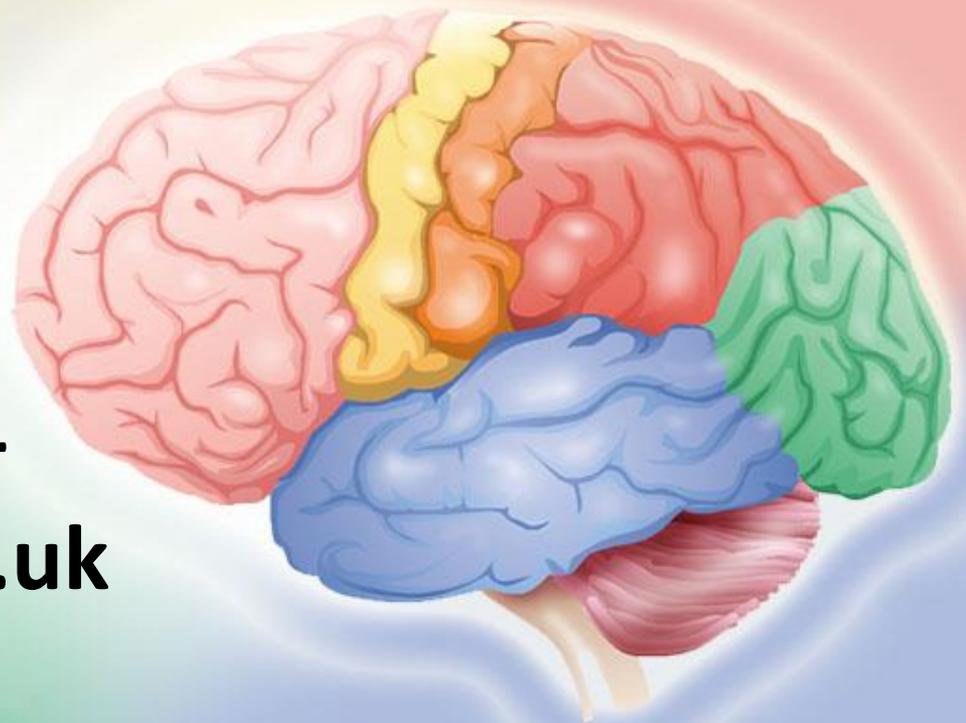
- **Sheffield Hallam University**
- Msc 15 credit Distant learning module
- **“Understanding and applying cognitive and perceptual processing to practice”**
- Explores:
- Understanding neuroanatomy in relation to cognition and perceptual function
- The use of cognitive rehabilitation models, approaches and techniques to rehabilitation.
- Applicable for allied health professionals that work within neurology, paediatrics, and mental health.

Colette Beecher

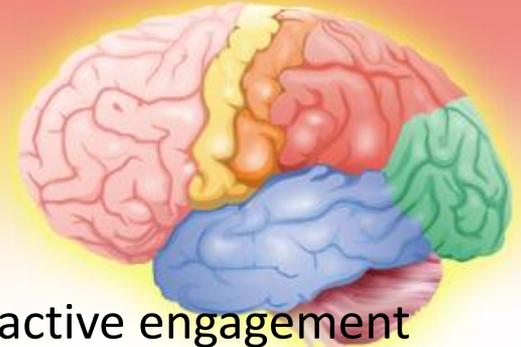
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Applying Learning Theories



Vygotsky & Piaget

- Social elements of learning
- Co-operative activity, collaborative problem solving and sharing.
- Reflection (independently or with support)
- Metacognition (personal beliefs and reflection on prior knowledge/experiences)

Authenticity



The subject content needs to be:

- Translated into real life situations which reach learners on a personal level (their prior knowledge and lived-experiences),
- In the context of their learning
(Cavanagh 2011).
- There needs to be a link between the context in which we acquire knowledge – to the context in which it is used so knowledge & skills are transferred.
(Oates & Grayson 2006)

Self-reference effect phenomenon



- As the learner selects their own resources and methods- they lay down memories, and associations which have greater personal meaning and therefore can be retrieved much easier.
(Cherney 2008).
- Apply the learning in ways that makes sense to them as individuals.
(Fisher 2002)

Socio-cognitive conflict



- Shared collaboration of cognitive solutions to communication conflicts that lead to constructive change. Intellectual conflict requires both an intellectual solution and a social solution.
(Buch et al 2008)
- Children, adolescents and adults have a capacity to benefit, in terms of developing their modes of thoughts, from situations in which the joint resolution of cognitive challenges is required
(schwarz et al 2000)

Communication



- The success of active learning depends not on methodology alone but, constantly-evolving, dialectical relationship between the learners, mediated by the educator.
(Kane 2004)
- Underlying interpersonal relationships are an important dynamic that in favourable circumstances can lead to productive change & development.
(Oates & Grayson 2006)

