

# The use of simulation as a teaching tool



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# Talk Aims

- Setting the scene
- Why use simulation in teaching?  
(pre & post qualifying)
- What makes a good simulation experience?
- Collaboration & sharing opportunities?
- Links to key papers embedded in the slides

# Within your work context.....

- Who doesn't use simulation?
- Who would like to?
- Who uses simulation?
- Who is directly involved in its delivery?
- Which settings?

# Why use simulation?

- Theory practice gap, patient safety etc.
- Teaching complexity
- Student / Staff experience
- **Resource intensive**
- **Simulation Based Education Strategy (HEE)**

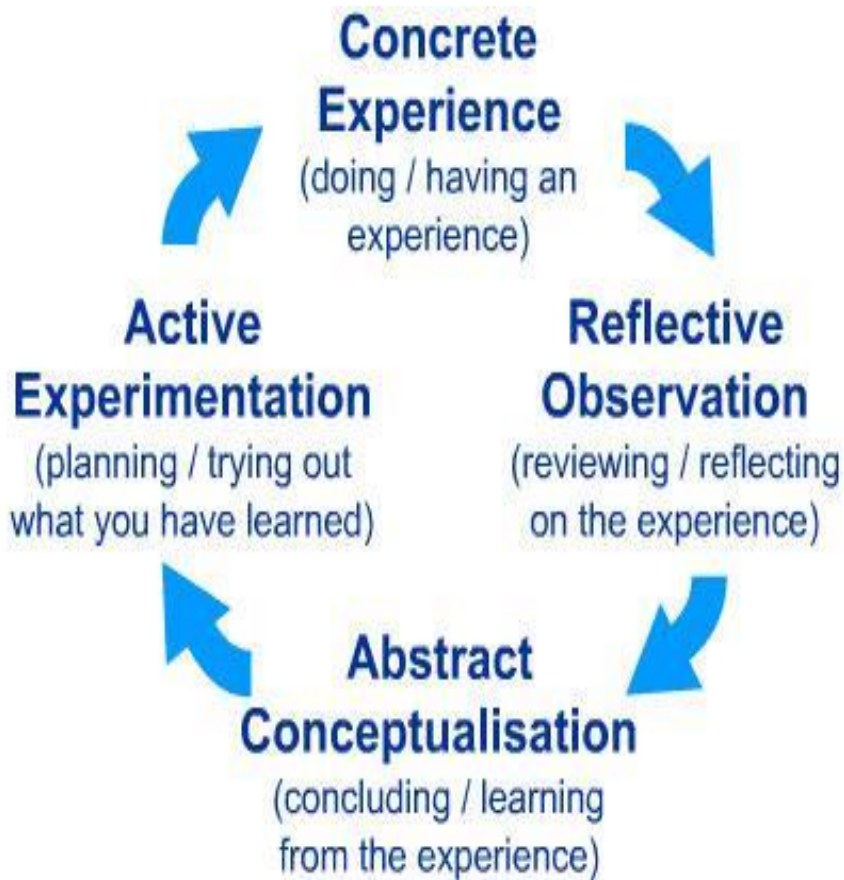
‘Health Education England will ensure development of a well-trained and engaged multi-professional workforce that is able to deliver safe, effective care by utilising meaningful and cohesive simulation-based education.’

PDF [here](#)

[Useful video link](#)

Plan is to have a SBE toolkit by end of March.

# The Role of Experience in Learning



“Learning is the process whereby knowledge is created through the transformation of experience”  
(Kolb, 1984, p. 38).

**All concepts are important for a balanced simulation experience.**

# What makes a good simulation?

## Biological Basis of Learning

Orchestrated immersion in complex environments

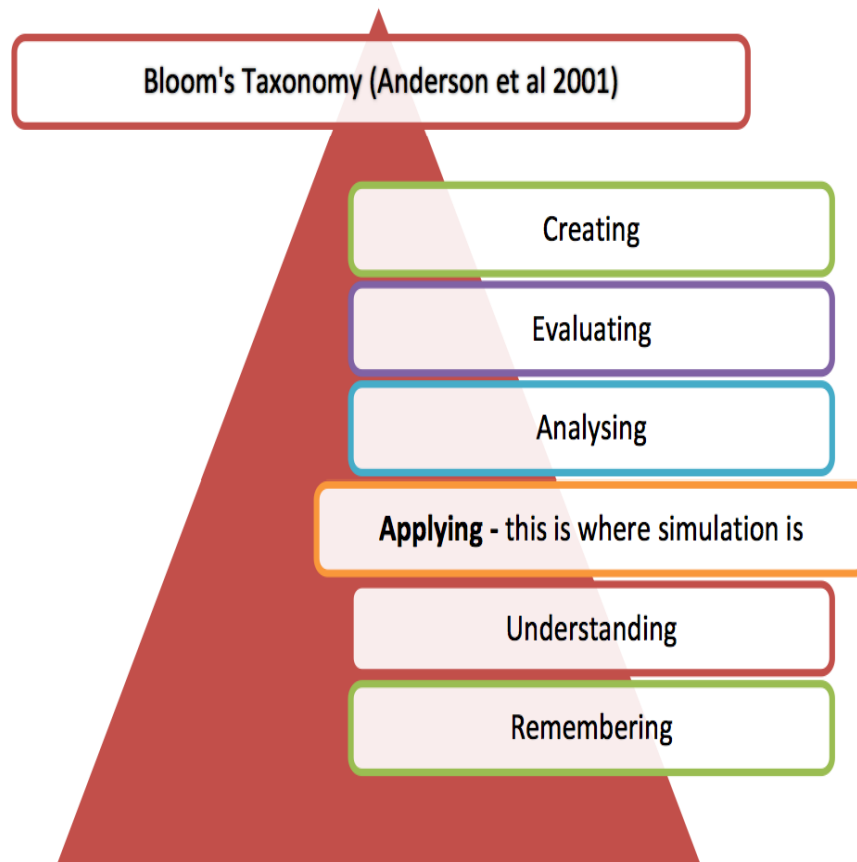
- Relaxed alertness
- Active Processing

(Paper by Rogers 2015)

# Orchestrated immersion in complex environments

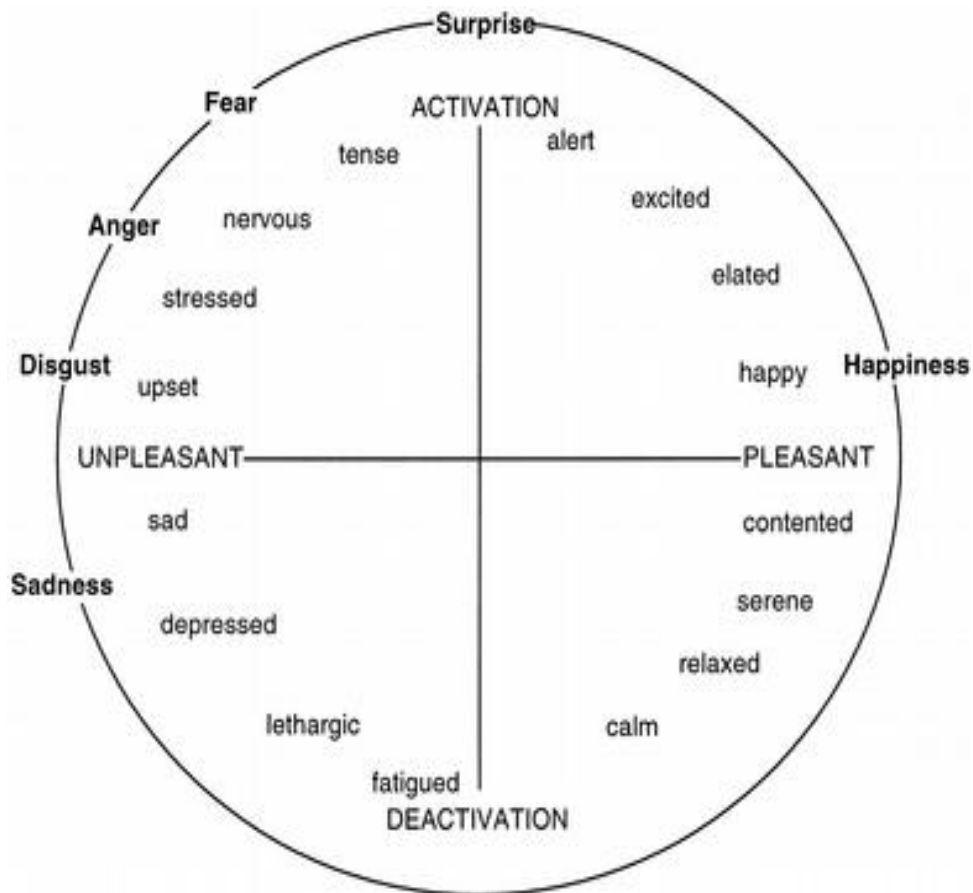
- Appropriately challenging environment
- Stretching the learner beyond their current operational or comfort zone
  - (Vygotsky's zone of proximal development – stretch but connect!)
- Must be achievable (but not too easy)
- LEARNING OBJECTIVES
  - ? student / faculty

# Pitching the level right



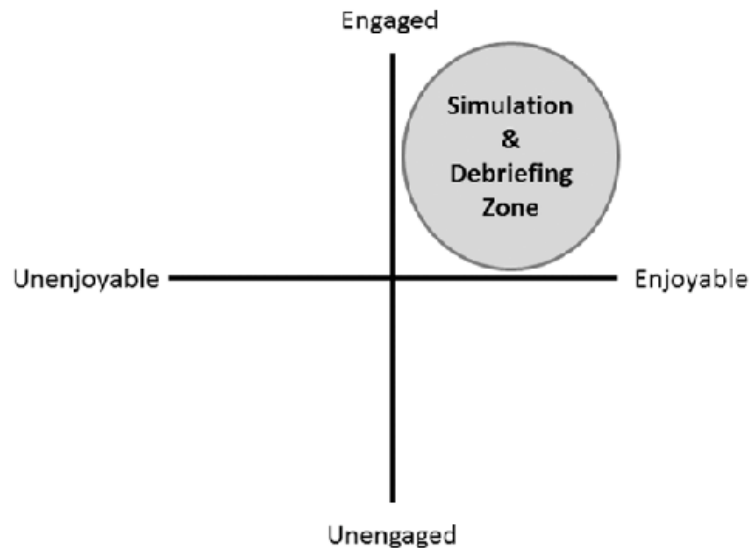


# Circumplex model of Emotion



Russell and Feldman Barrett, 1999

# Emotional Learning



The emotional "sweet spot" for simulation and debriefing. Source. Adapted from Russell and Feldman Barrett (1999).

-One's emotional state during the learning experience influences retention & activation of knowledge.

-Highly activated states tend to make learning more indelible.

-Performance is enhanced when the learning & clinical states are similar.

# Creating a safe learning environment

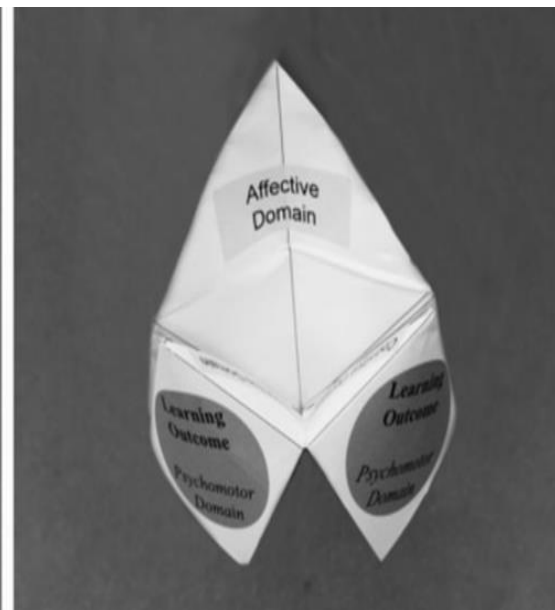
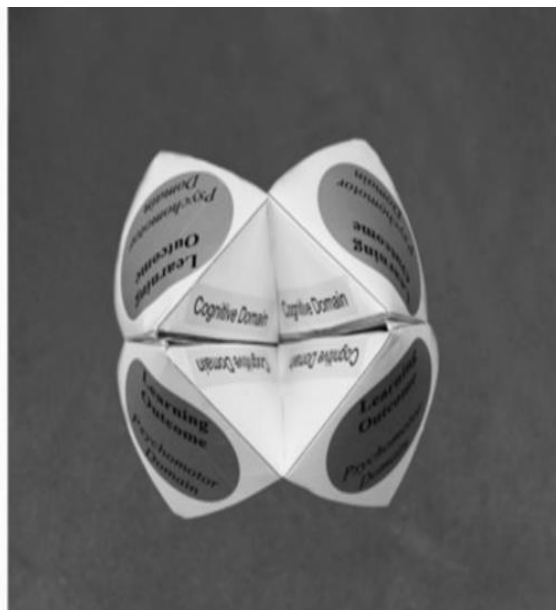
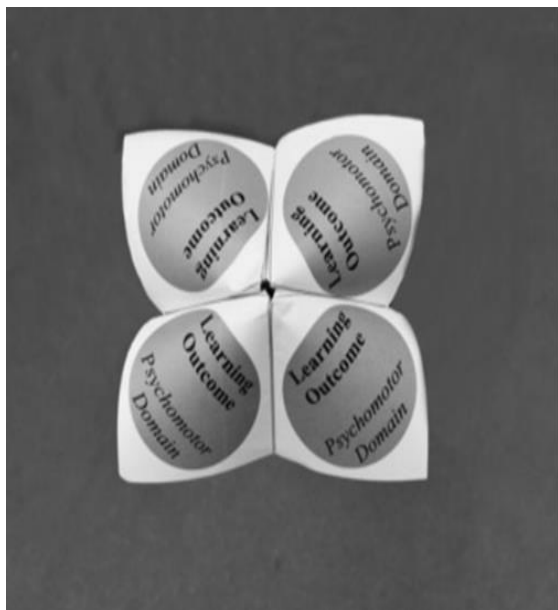
- Psychological safety
- Role of Pre-Briefing
- Basic assumption
- Fiction contract
- Transparency
- Clear learning objectives (participant focus)

# Role of debriefing

- Possibly the most important bit (alongside the prebrief)
- ? most challenging aspect
- Timing and structure
- Keeping ALL participants engaged throughout

# Models of debriefing

## Origami Debriefing Method



# Unfolding the learning moments in simulation

Oxford Brookes Based debriefing method published by Clare Butler, Rozz McDonald & Clair Merriman

[BMJ link](#) to 2017 paper.

- *Allows the learner to analyse the experience at the time of the event & construct new knowledge & understanding by unfolding the learning moment as it occurs.*

# Debriefing Diamond

UK Based method – Peter Jaye, Libby Thomas, Gabriel Ready  
SaIL Centre in London [Link to 2015 paper](#)

Based on a technique of

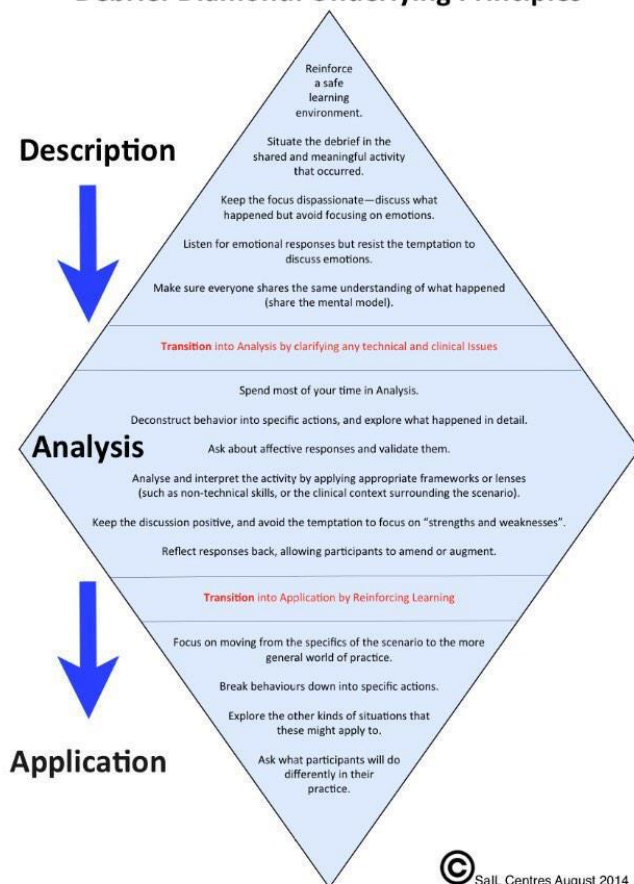
- description, analysis & application
- Along with aspects of the A/I approach (debriefing with good judgement)

Uses specific prompts & key phrases

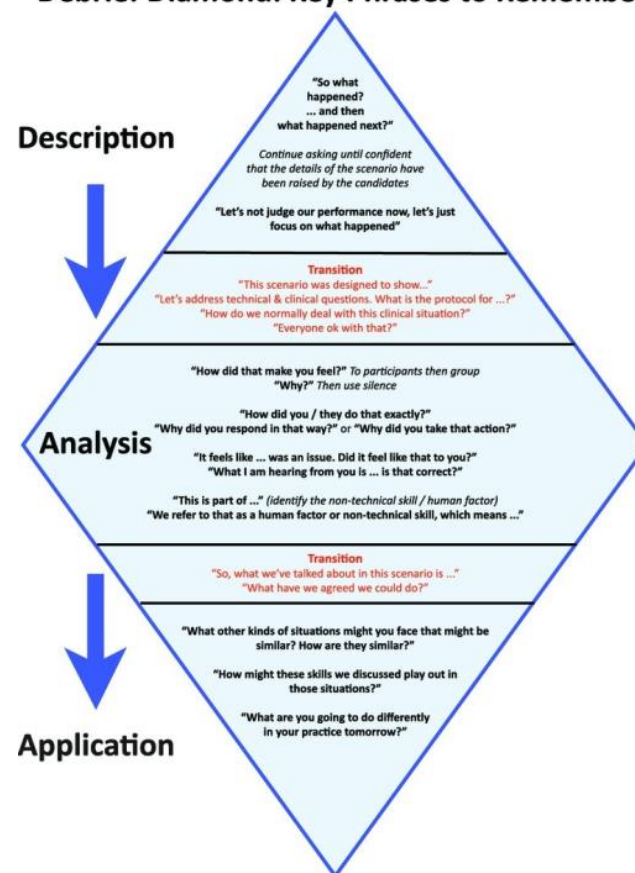
- may seem didactic inflexible but this is purposeful.

# Debriefing Diamond

## Debrief Diamond: Underlying Principles



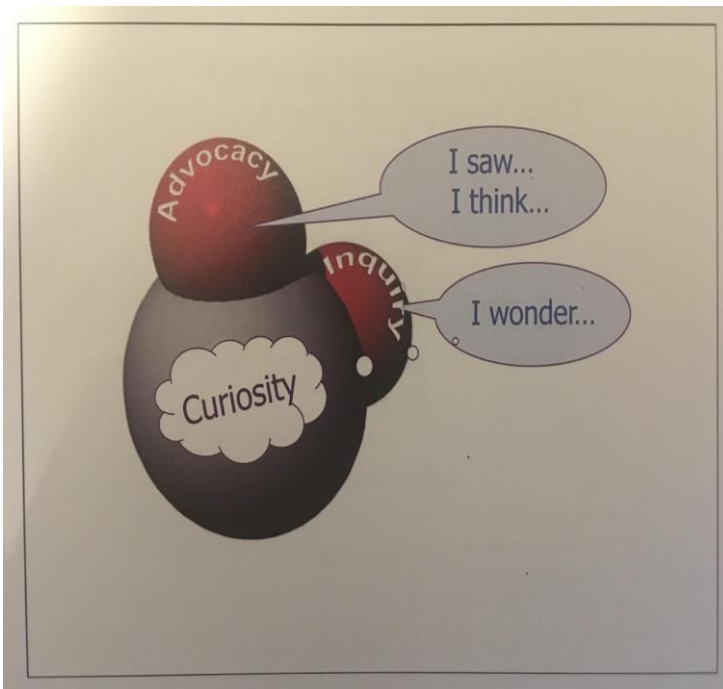
## Debrief Diamond: Key Phrases to Remember





# Debriefing with good judgement....A/I

US based approach. Jenny Rudolph from CMS, Harvard Medical School. [Abstract to 2007 paper here](#)



## Three Phases of Debriefing

- **Reactions** - Clear the air and set the stage for discussion
  - Feelings
  - Facts
- **Understanding** - Analyze and apply
  - Exploring -- explore trainee's perspective on scenario events
  - Discussion and teaching -- help move trainees to new perspectives, understandings, and skills
  - Generalize and apply -- lessons learned to real settings
- **Summary** - Distill lessons learned for future use
  - Major "take-aways"

# Debriefing with good judgment

## DOES

- Use curiosity, respect and your own unique style to explore the basis of performance
- Share observations, opinions & judgements based on expertise
- Inclusion of other participants
- Balance of conversation key

## DOES NOT

- Assume a stance of certainty & righteousness

# Simulation at Brookes

- Year 1 (respiratory)
- Year 2 (interprofessional learning and long term conditions, placement preparation)
- Year 3 (on-call respiratory and paediatric specialist module)
- Recruitment / widening participation
- Research

