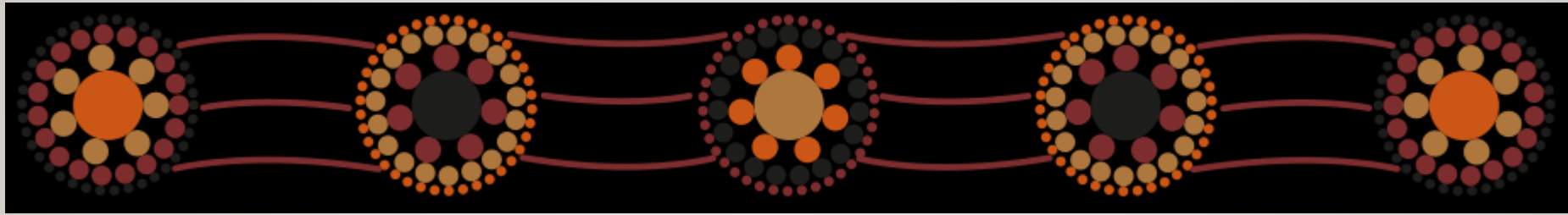# UNIVERSITY OF SOUTHERN QUEENSLAND

BRENDAN SUESEE

ACKNOWLEDGMENT OF COUNTRY

- I acknowledge Aboriginal and Torres Strait Islander peoples as the traditional custodians of our land – Australia. The Gadigal of the Eora Nation are the traditional custodians of this place we now call Sydney.

- I also like to pay respect to the Elders, - past, present and future.

THE WORD 'YAKKA" (HARD YAKKA) DERIVES FROM 'YAGA' MEANING 'WORK' IN THE YAGARA LANGUAGE OF THE BRISBANE REGION.

AIS NSW CONFERENCE
SYDNEY 12 MAY
QUALITY PE CONFERENCE: CRITICAL & CREATIVE THINKING THROUGH THE SPECTRUM OF TEACHING STYLES

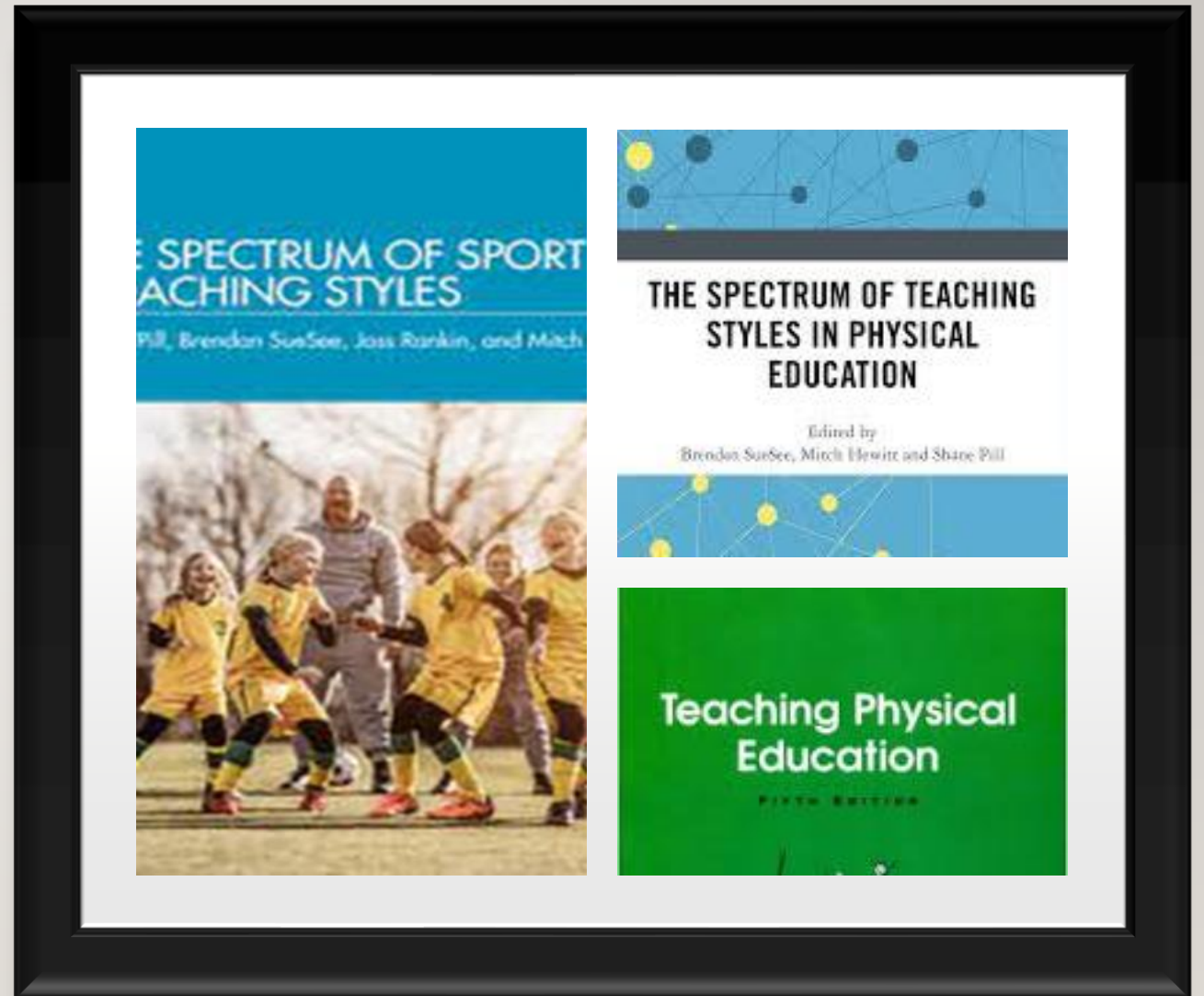- 3 DISCOVERY EPISODES FROM THE SPECTRUM OF TEACHING STYLES.

- A SPECTRUM FESTIVUS CELEBRATION!

-

WHAT'S GOING TO HAPPEN IN THIS SESSION?

_____

- **Free download** https://spectrumofteachingstyles.org/index.php

- **In this session you will:**

- See 3 types of discovery episodes,

- Participate in groups to create 3 discovery episodes.

- Demonstrate in groups your discovery episodes.

WHAT'S A DISCOVERY EPISODE?

- M&A (2008) speak about 3 cognitive operations – memory, discovery and creativity.

- Styles A – E require the learner to use memory (or recall or knowledge, skill, tactics) and are known as the reproduction cluster – reproduce knowledge, movement etc.

- Styles F through K are known as the production cluster, styles in this cluster require the learner to engage in discovery/creativity – a thinking process that engages learners in the production of information that was previously unknown to them (Ashworth, 2020).

- Guided Discovery – Style F, Convergent Discovery – Style G & Divergent Discovery – Style H.

GUIDED DISCOVERY

- Defining characteristic is the creation of logical/sequential questions to discover a predetermined response. The teacher uses a series of questions (usually starting with questions which require the student to use memory) requiring the student to reflect on what may just have occurred and culminating with a final question where the student discovers the answer which may be a relationship or tactic (M&A, 2008)

GUIDED DISCOVERY

Pre-Impact – Teacher – objectives, subject matter, design of the logical sequence of q's

Impact set – Teacher/Learner – responds to q's asked by the T.

Post-Impact Set – Teacher/Learner – receives feedback and verifies solution.

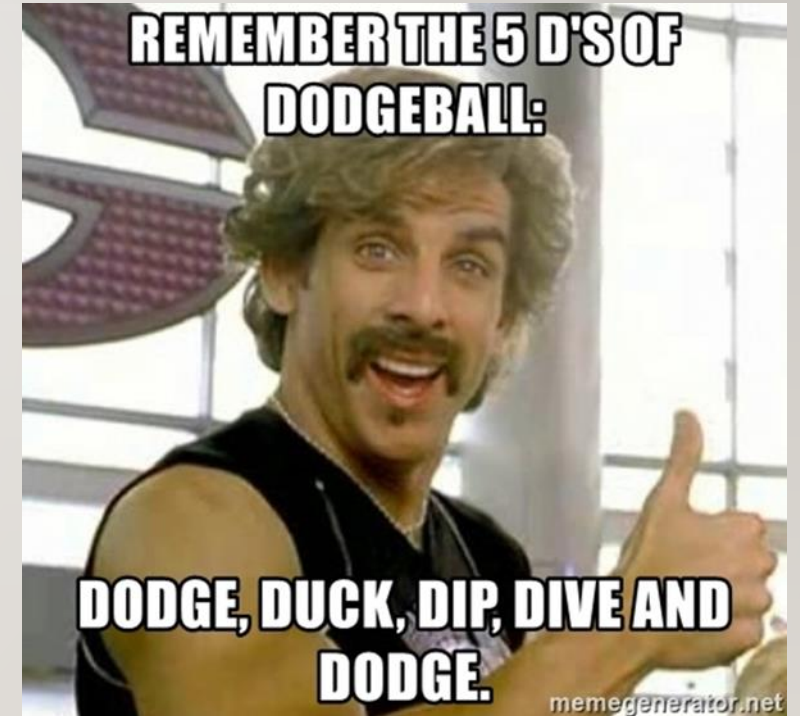# DISCOVERY EXPERIENCE ONE - GUIDED DISCOVERY!

- Play a game of Endball/Endzone.

- Identify the teachable moments ……..which are…..?

- When something is going well or when something is not going well.

GUIDED DISCOVERY QUESTIONS (5W'S + H)

- WHAT HAPPENNED….?

- WHY DO YOU THINK THAT HAPPENED….?

- HOW COULD YOU MAKE IT HARDER FOR THEM TO….?

- WHEN?

- WHO?

- WHERE?

BEGINNER VERSION

- **What** happened……?

- **Why** did this happen…?

- **How** could you prevent this from happening….?

- **What** would have made this more difficult for the defender to….?

- **Finish this statement for me** "The closer/faster/slower I move/pass/go the easier/harder it is for the defender to……?

2 W'S & AN H

WHAT HAPPENNED….?

……

……

……

WHY DO YOU THINK THAT HAPPENED….?

……

……

……

HOW COULD YOU MAKE IT HARDER FOR THEM TO….?

……

……

WHY DO THIS?

- When you ask the questions you ask S's to take out your card and write a brief answer to the Q's.

- Then we will share our responses.

- By doing this initially it stops 'free riders' (I don't know so I will not search/try-I'll just get the answer off someone else) and creates an environment/expectations from the T that they expect everyone to think. When we share (in small groups or as a class) there will be people who didn't know and will now get the answer off others but this strategy encourages all to try to discover.

GUIDED DISCOVERY IN GROUPS?

- *Although many learners within a group setting can benefit from this process, the liability is that learners discover at different speeds. When one learner has discovered the answer (anywhere in the sequence) and utters it aloud, the other learners who hear (or see) the response become the receivers. They can no longer discover it. For these students, the discovery process has been aborted* (M&A, 2008, p. 221).
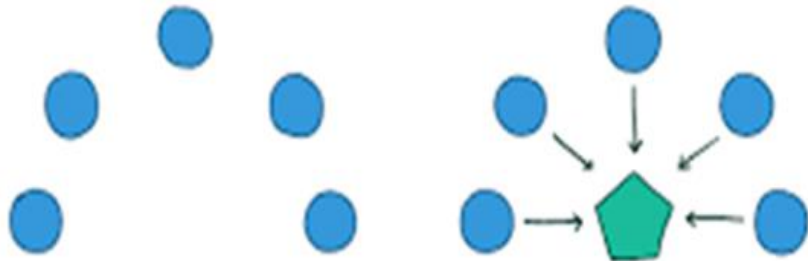
CONVERGENT DISCOVERY

- Defining characteristic is to discover the correct (predetermined) response using a convergent a process. In the anatomy of the Convergent Discovery style, the role of the teacher is to make subject matter decisions, including the target concept to be discovered, and to design the single question delivered to the learner. The role of the learner is to engage in reasoning, questioning, and logic to sequentially make connections about the content to discover the answer. The teacher does not ask the student for one answer if there is in fact many answers. (M&A, 2008).

Convergent Thinking

Start with information.   Converge on a solution.
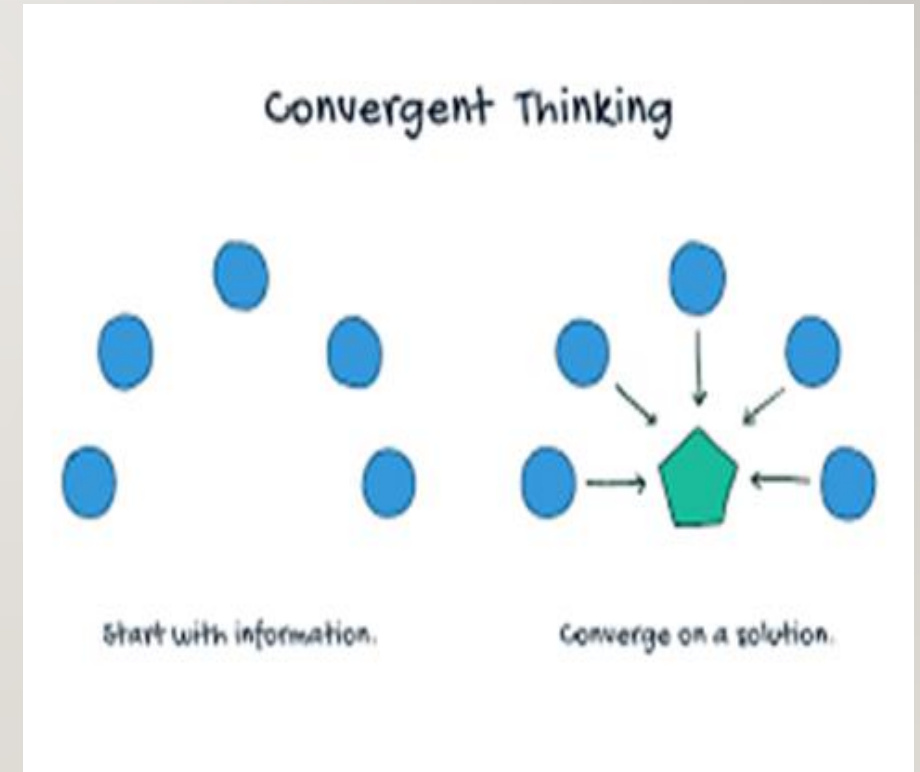
CONVERGENT DISCOVERY

Convergent Thinking

Start with information.   Converge on a solution.

- To discover the correct (pre-determined) response using a convergent thinking process. There will be one correct answer.

- Pre-Impact – Teacher – subject matter decisions, target concept to be discovered.

- Impact Set – Learner – to engage in reasoning, questioning to discover the concept.

- Post-Impact – Learner – verifying through checking or seeing their solution solve the problem!

CONVERGENT DISCOVERY

- DANGER!

- Do not use Convergent Discovery if there is more than one answer – Divergent Discovery needed!

A GSA COULD BE USED TO CREATE AN ENVIRONMENT WHICH ALLOWS THE CONCEPT TO BE TAUGHT (DISCOVERED OR MEMORY/RECALL) WHEN IT IS THE BEST TO PASS OVER THE HEAD OF THE DEFENDER? THE GAME HAS A FORMATION OF A RECTANGLE AND ATTACKER 1 (A1) IN A HOOP IN THE MIDDLE AND ATTACKER 2 (A2) AND DEFENDER 1 (D1) AT LEAST 1 METRE FROM A1. IN GROUPS OF 3 WE WILL ASK ALL THREE STUDENTS TO DO 20 PASSES IN TOTAL OUT OF THE CIRCLE. THEY ARE TO DO 10 TO THE LONGEST PART OF THE RECTANGLE (GAME 1) AND 10 TO THE SHORTEST (GAME 2). THEY THEN ARE ASKED "IN WHICH OF THESE TWO SITUATIONS IS IT MOST APPROPRIATE TO DO A PASS OVER D1?"

GAME 1

Figure 1—A pass to the short side of the rectangle.
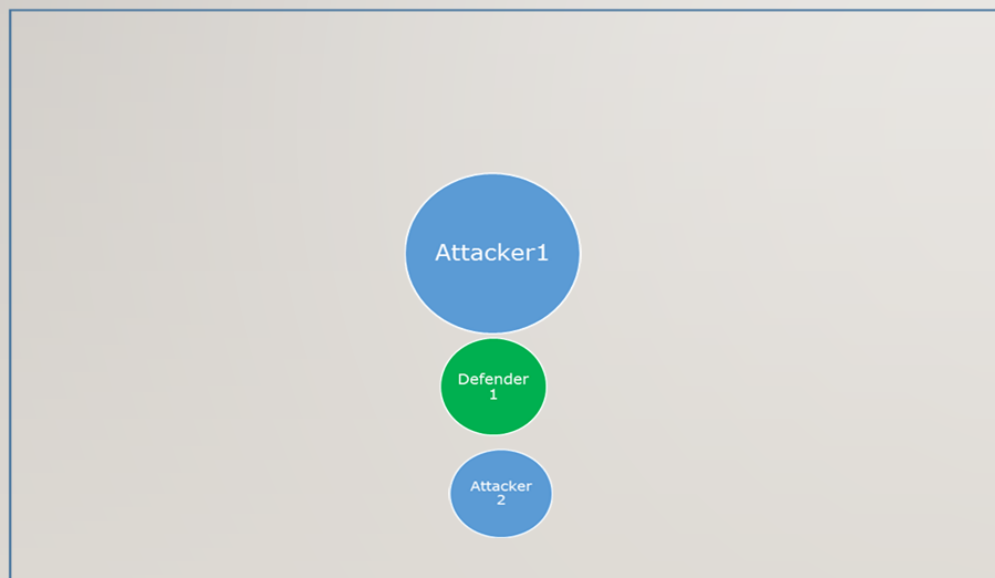
GAME 2

Figure 2—A pass to the long side of the rectangle.

MORE CONVERGENT DISCOVERY!

- As before but speed being the variable to manipulate,

- They can then present their Convergent Discovery episodes to the group.

- Then……**Go back to Endball** game and see if there is **transfer** of the tactic we discovered.

- Design a series of questions which elicit convergent discovery or 1 answer. Q's should converge on answer or preferred solution. Game provides a situation for preferred response through manipulating rules, space etc.

PRODUCTION THINKING: "IF-THEN-BECAUSE" WITH THE IDEA THAT S'S WILL EVENTUALLY DO THIS UNPROMPTED/NO SCAFFOLDING.

"If-Then-Because"

IF I am ....?

THEN I can/not ....?

BECAUSE..?

DIVERGENT DISCOVERY

- defining characteristic is to discover divergent (multiple) responses to a single question/situation, within a specific cognitive operation. In the Anatomy of the Divergent Discovery Style, the role of the teacher is to make decisions about the subject matter topic and the specific questions and logistics to be delivered to the learner. The role of the learner is to discover multiple designs/solutions/responses to a specific question (M&A, 2008).

DIVERGENT DISCOVERY

- is the creation of two or more "responses to a single question/situation, within a specific cognitive operation".

- Pre-Impact – Teacher – Subject matter, questions delivered to the learner.

- Impact Set – Learner – discover multiple solutions to the problem/question.

- Post-Impact Set – Learner – verifies solutions.

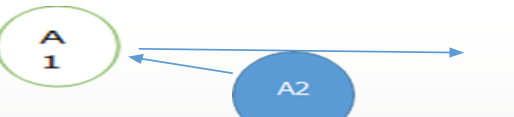Divergent thinking:

One stimulus, many responses

DIVERGENT DISCOVERY— IS THE CREATION OF TWO OR MORE "RESPONSES TO A SINGLE QUESTION/SITUATION, WITHIN A SPECIFIC COGNITIVE OPERATION". "CREATE 2 OR MORE WAYS TO RECEIVE A PASS FROM ATTACKER 1". WRITE YOUR STRATEGIES ON THE POST-IT NOTES AND STICK THEM ON THE BOARD.
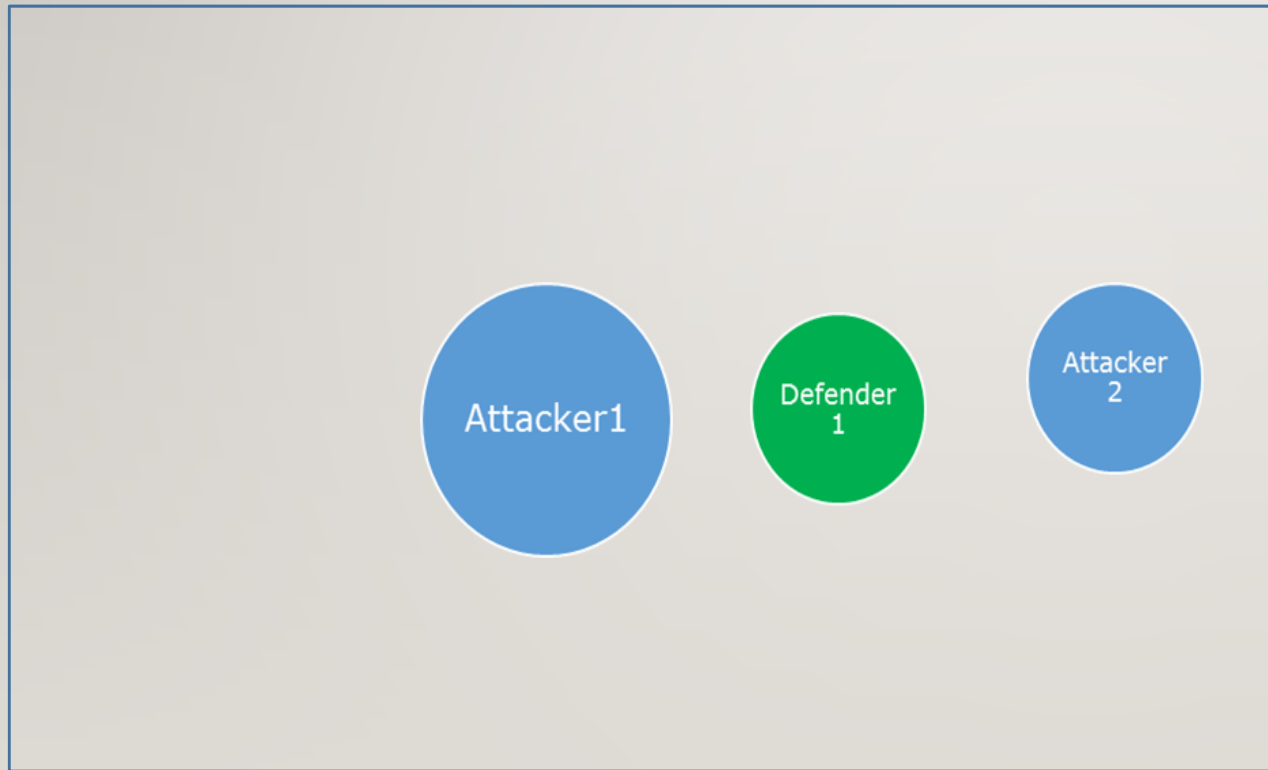
DIVERGENT DISCOVERY

Possible Solutions	Diagram
A2 Leads in towards A1 and goes to left.	
A2 leads in towards A1 and goes to the right	
A2 leads in towards A1 and then straight back	
A2 leads in towards A1's right and then straight back to left	
A2 leads to A1's left and breaks back to the right	

DIVERGENT DISCOVERY EPISODE

- Participants to write their 'create space' strategies on post-it notes (and post to white board) and demonstrate what they created. (5-10 minutes).

- **Then**……Go back to Endball game and ask 1 student (in their group of 3) to choose a 'space creating' option from the white board. Play a 3 v 3 or 4 v 4 game of Endball to see how effective the strategy is. If it is not successful (or even if it is) pick a new strategy from the whiteboard and go again.

- The **Divergent Discovery** episode can then be extended (or cycle back on itself) by asking the participants to then pick 3 from their Divergent Discovery episode and trial each 5 times to evaluate which one (**Convergent Discovery**) is the most effective/successful?

CARDS TO SCAFFOLD DISCUSSION/THINKING

Claim, Support, Question #1

Space, Predict, Aware, Anticipate, Rapid, Plan, Sense, Strategy, Thinking, Analyse, Move, Dodge, Lead-Off, Fake, End Zone, Wing, Side Line, Centre Court, Boundary, Bounce Pass, Chest Pass, Lob Pass, Technique, Agile, Footwork, Vision, Effective, Drawing Defenders, Creating Space, Marking, Tagging, Staying Tight, Man to Man, Zone, Losing your Marker, Pass and Move, Communication, Closing Down, Over-Lap

How can the OFFENSIVE team use Game Sense to best effect in this game?

1. **Make a CLAIM about the topic**

2. **Identify SUPPORT for your claim**

3. **Ask a QUESTION related to your claim**

CARDS TO SCAFFOLD DISCUSSION/THINKING

Claim, Support, Question #2

Space, Predict, Aware, Anticipate, Rapid, Plan, Sense, Strategy, Thinking, Analyse, Move, Dodge, Lead-Off, Fake, End Zone, Wing, Side Line, Centre Court, Boundary, Bounce Pass, Chest Pass, Lob Pass, Technique, Agile, Footwork, Vision, Effective, Drawing Defenders, Creating Space, Marking, Tagging, Staying Tight, Man to Man, Zone, Losing your Marker, Pass and Move, Communication, Closing Down, Over-Lap

How do you know when your DEFENSIVE game play is effective?

1. Make a CLAIM about the topic

2. Identify SUPPORT for your claim

3. Ask a QUESTION related to your claim

CARDS TO SCAFFOLD DISCUSSION/THINKING

Claim, Support, Question #3

Space, Predict, Aware, Anticipate, Rapid, Plan, Sense, Strategy, Thinking, Analyse, Move, Dodge, Lead-Off, Fake, End Zone, Wing, Side Line, Centre Court, Boundary, Bounce Pass, Chest Pass, Lob Pass, Technique, Agile, Footwork, Vision, Effective, Drawing Defenders, Creating Space, Marking, Tagging, Staying Tight, Man to Man, Zone, Losing your Marker, Pass and Move, Communication, Closing Down, Over-Lap

What LEARNING will you TRANSFER to ANOTHER INVASION GAME? (Choose a more CHALLENGING or COMPLEX topic)

1. **Make a CLAIM about the topic**

2. **Identify SUPPORT for your claim**

3. **Ask a QUESTION related to your claim**

WHY DO I NEED TO DO THIS?

- Not developing the 'whole' person.

- Development Channels – Social, Physical, Ethical, Emotional & Cognitive

- Just developing someone through the reproduction cluster styles – using memory/recall

- ACARA document

Whole Child Education
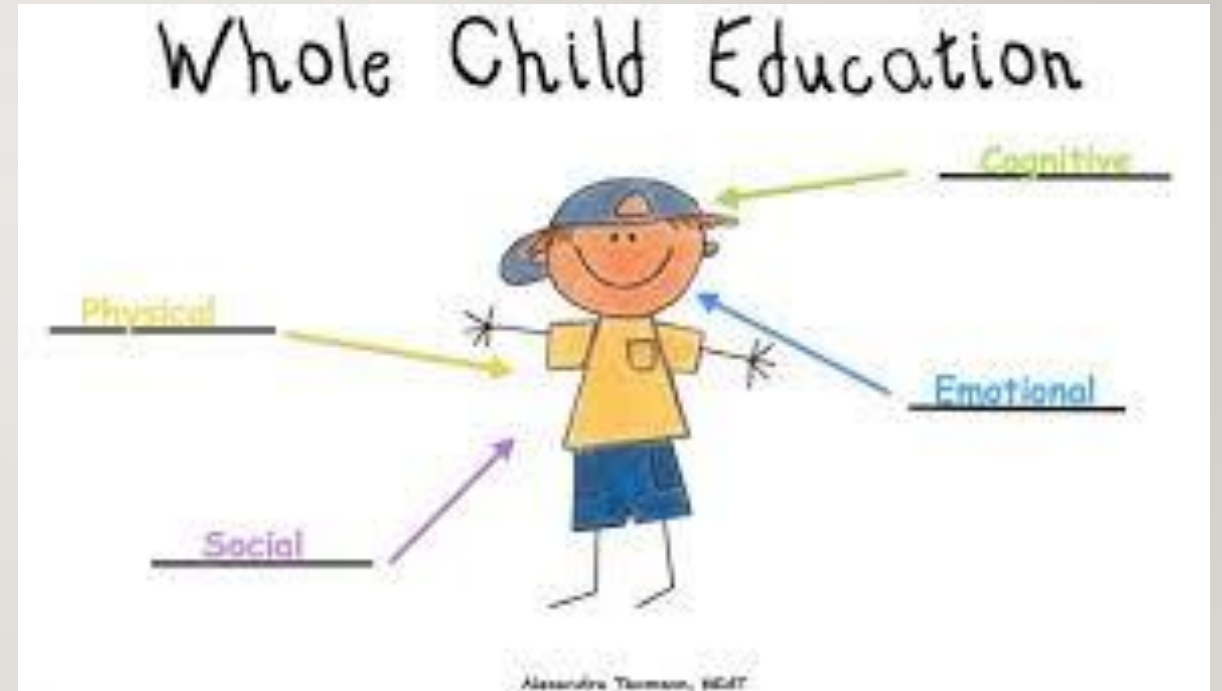
ACARA ELABORATIONS

- modifying rules, equipment or scoring systems to allow all participants to enjoy and succeed (years 7/8/St 4 p. 50/p.81), Divergent Discovery

- Through movement, students develop and refine movement concepts and strategies that enable them to think both critically and creatively to improve performance, solve movement challenges and persist in achieving set goals.(p. 34), Convergent/Divergent

- manipulate and modify movement concepts and strategies to achieve movement outcomes and solve movement challenges. (p. 21), Divergent Discovery

- . In response to unpredictable situations they work alone and collaboratively to design and apply creative solutions to movement challenges (p. 22), Divergent/Convergent Discovery

- How can I apply my skills to collaborate, communicate, solve problems and include others in physical activity?(St 4 p. 81), Divergent Discovery

ACARA ELABORATIONS

- manipulate and modify elements of space, time, objects, effort and people to perform movement sequences, (St 3, p. 70), Divergent Discovery

- explores possible solutions to movement challenges through participation in a range of activities (Stage 1, p. 41), Divergent Discovery

- demonstrating movement concepts and strategies to create scoring opportunities (St 2, p. 61) Divergent Discovery

- test alternative responses to movement challenges and predict the success or effectiveness of each, eg create space, positional awareness in (St 2, p. 61) Divergent Discovery

- designing a sequence of passes between teammates to maintain possession or move a piece of equipment from one point to another (St 3, p. 70) (Convergent Discovery)
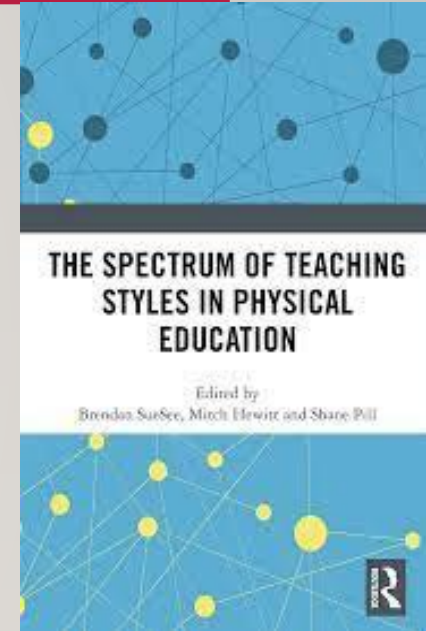
ACARA ELABORATIONS

- proposing changes to the rules and/or conditions to create a more inclusive game or to allow for a fairer Contest (St 3, p. 71) (Divergent Discovery).
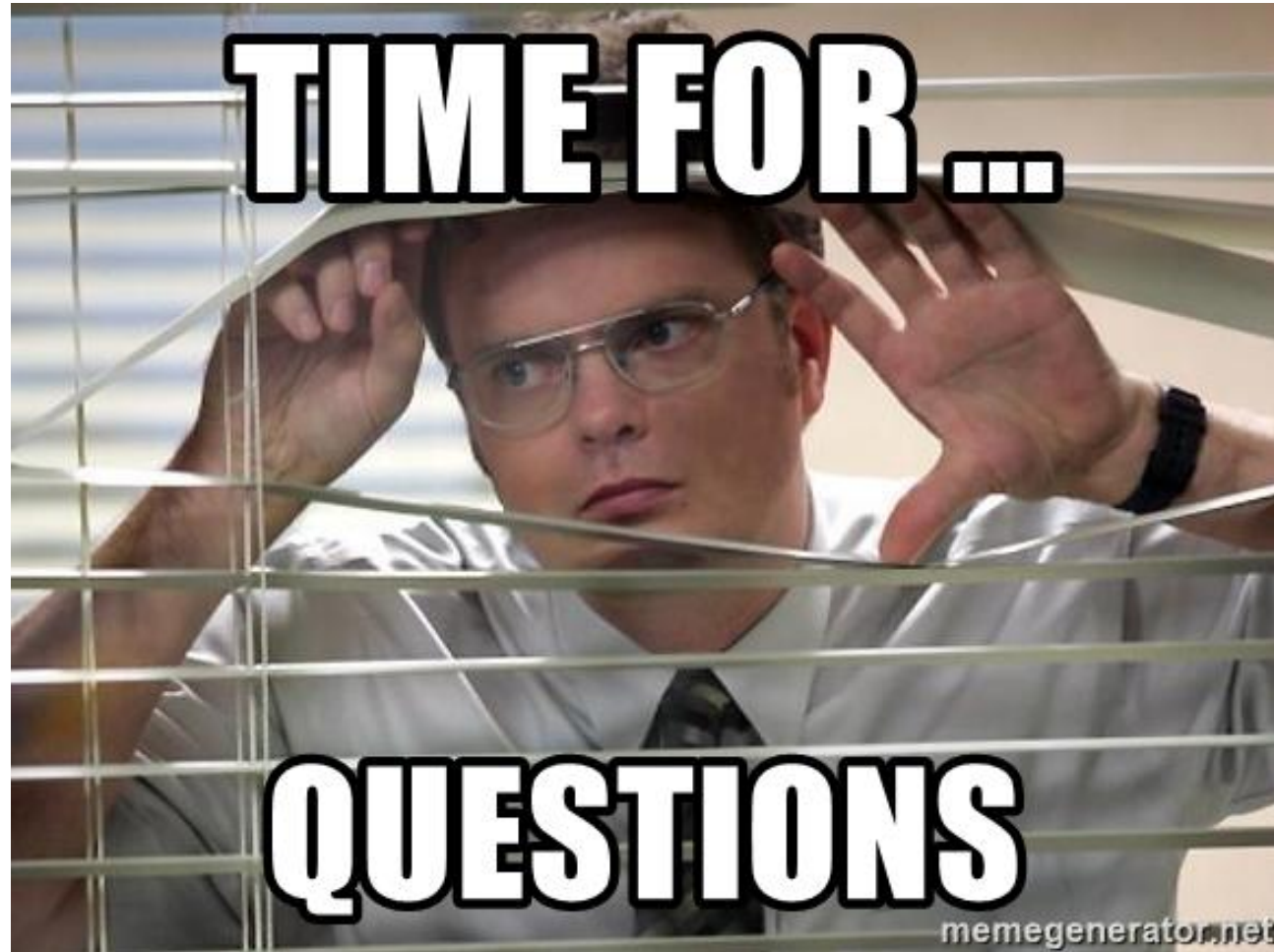
RECOMMENDED READING:

- Hamada, M. **Game-based learning and using visible thinking routines - asking meaningful questions**. *Active and Healthy Magazine Special edition – Game Sense*, 22 2/3 (2015), 7-12.

- Brendan SueSee & Shane Pill (2018*)* **Game-Based Teaching and Coaching as a Toolkit of Teaching Styles**, *Strategies, 31:5*, 21-28, DOI: 10.1080/08924562.2018.1490233

- SueSee, Brendan and Pill, Shane and Hewitt, Mitch (2020) **Reconciling approaches: Mosston and Ashworth's Spectrum of Teaching Styles as a tool to examine the complexity of any teaching (or coaching) approach.** In: *The spectrum of teaching styles in physical education. Taylor & Francis* (Routledge), London, United Kingdom, pp. 73-84.

- Pill, Shane and SueSee, Brendan. (2017) **Including critical thinking and problem solving in physical education.** *Journal of Physical Education, Recreation and Dance, 88 (9)*. pp. 43-49.

TIME FOR ...

QUESTIONS

memegenerator.net

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