Inquiry learning in Physical Education

ACHPER Brisbane

18 August, 2017
We acknowledge the Traditional Owners of this land and pay our respects to Elders past, present and future, for they hold the memories, traditions and cultures of Aboriginal peoples and Torres Strait Islander peoples throughout Australia.
About me...

(Source unknown)
About you…

Which sector?

Years of teaching?

Implementing AC:HPE?

Teaching Year 11/12 PE?

Teaching Year 11/12 Health?
About this session

• Develop further understanding of the importance of inquiry in teaching and learning

• Develop enhanced framing of questions for inquiry

• Develop new ideas to integrate inquiry into teaching and learning
The meaning of ‘knowing’ has shifted from being able to remember and repeat information to being able to find and use it.

(National Research Council, 2007)
Implications for pedagogy?

(A Adapted from McWilliam, 2009)
A 'sage on stage' is a teacher who lectures almost exclusively, who has the philosophy that s/he has knowledge to 'give' learners who would benefit from this.

The teacher is the knower who ought to be providing all the maps in the learning process.
‘Guide on the side’

A ‘guide on the side’ is a facilitator who helps learners discover knowledge and steer them in ways that would help them.

Tends towards passive engagement
‘Meddler in the middle’

Encourage rigorous thinking
Low threat, high challenge pedagogy
Create ‘hands on’ and ‘minds on’ learning experiences
Active processing of information
Clear learning intentions
Provide support and direction through structure-rich activities
Teacher highly involved in learning processes
Demonstrates a high level of technical expertise

(McWilliam, 2009)
How do we become ‘meddlers in the middle’?
• create opportunities for ‘hands-on, minds-on’ learning
• more time spent on working through problems in a way that puts everyone in the thick of the action
• more time spent on experimentation, risk-taking and co-learning
• more time spent on designing, editing and assembling knowledge
• more time spent on designing alternative forms of authentic assessment
• more time spent on ‘collaborative criticality’ and authentic evaluation.

(McWilliam, 2009)
Inquiry and ‘meddling in the middle’
Why inquiry? General capabilities

(ACARA, 2017)
Why inquiry?

**AC:HPE P–10 Key ideas**
- Focus on educative purpose
- Take a strengths-based approach
- Value movement
- Develop health literacy
- Include a critical inquiry approach
Key ideas

Focus on educative purpose
Take a strength-based approach
Value movement
Develop health literacy
Include a critical inquiry approach
Characteristics - Inquiry based learning

• creating sense of purpose and authenticity around ‘real world’ tasks and issues
• encouraging students to become co-creators of their learning
• developing skills in research, self-direction, critical thinking and problem solving
• developing discipline knowledge and skills

(Felder and Brent, 2009)
Characteristics of inquiry

- framing of questions
- recursive nature of inquiry
- active construction of meaning
- learning in context

(Nayler, 2001)
Planning for inquiry
Teaching and learning planning for inquiry

Curriculum ‘what’

Pedagogy ‘how’

Assessment ‘how well’
Inquiry – a continuum

active
open
integrated
concept driven
transferable
authentic
complex
connected
deep

passive
closed
separated
fact-driven
fixed
simulated
simplistic
fragmented
surface

(Adapted from Murdoch, 2015)
Planning for inquiry

**Critical Thinking Framework**

**STEP 1** Determine learning objectives
- Define behaviours students should exhibit
- Target behaviours in higher order thinking

**STEP 2** Teach through questioning
- Develop appropriate questions
- Employ questioning techniques
- Encourage interactive discussion

**STEP 3** Practice before you assess
- Choose activities that promote active learning
- Utilise all components of active learning

**STEP 4** Review, refine and improve
- Monitor class activities
- Collect feedback from students

**STEP 5** Provide feedback & assessment of learning
- Provide feedback to students
- Create opportunities for self-assessment
- Utilise feedback to improve instruction

---

Figure 2. A critical thinking framework

Teaching through questioning
Focus Area B
Process and effects of training and exercise —

How can an understanding of physiology of exercise, training and program development improve team and individual performance?

Category: Direct Interceptive
Futsal, Netball, Touch, Water Polo
The power of the right questions
Question Formulation Technique

Stimulus → Produce → Refine

Reflect ← Decide ← Prioritise

(RQI, 2017)
The power of the right questions

(dhsg.co.uk, 2017)
The power of the right questions

• Generate questions
  ▪ Ask as many questions as you can
  ▪ Don’t stop to judge or answer
  ▪ Write down every question exactly as you thought of it
  ▪ Change any statement into a question
The power of the right questions
Refine your questions

- refine and modify
- develop open questions
- re-develop closed questions
Prioritise your questions

• choose specific questions you would like to investigate further
• group into categories
• suggestions
  • movement patterns?
  • interplay of energy systems?
  • training strategies?
  • components of fitness?
  • other?
Mind mapping

Energy, fitness and performance

- Training strategies
- Movement patterns
- Components of fitness
- Energy system interplay
Data sources…
Next steps

• How do we use these core questions to guide us?
Reflect on learning

• What has been learned?
• Explain in your own words?
• What needs re-visiting?
• What still needs clarifying?
• Are there additional questions now?
• Where to from here?
Some other strategies…

• Before the bounce
• Game Performance Assessment Instrument (GPAI)
• See, think, wonder
• What makes you say that?
• Mind mapping
• Journal—reflection on learning
Before the Bounce

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Space</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Force</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flow and Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 1. A template for planning questions and problems for solution (Adapted from Pill, 2014)
# Game Performance Assessment Instrument (GPAI)

<table>
<thead>
<tr>
<th>Name</th>
<th>Decision Making</th>
<th>Skill Execution</th>
<th>Adjust</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Appropriate (A)</td>
<td>Efficient (E)</td>
<td>Appropriate (A)</td>
</tr>
<tr>
<td></td>
<td>Inappropriate (IA)</td>
<td>Inefficient (IE)</td>
<td>Inappropriate (IA)</td>
</tr>
<tr>
<td>Kate</td>
<td>![Graph]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Score %</td>
<td>Decision Making _____ %</td>
<td>Skill Execution _____ %</td>
<td>Adjust _____ %</td>
</tr>
<tr>
<td>Daryl</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Score %</td>
<td>Decision Making _____ %</td>
<td>Skill Execution _____ %</td>
<td>Adjust _____ %</td>
</tr>
</tbody>
</table>

(Hopper, 2002)
See, think, wonder…

What do you see in this image?

What do you think about when you see this image?

What do you wonder about when you see this image?
What makes you say that?

CLAIM, SUPPORT and QUESTION

• Make a CLAIM about the image

• SUPPORT—something that you see, feel, know about your claim

• Ask a QUESTION related to your claim e.g. What’s left unanswered? What isn’t explained? What new questions are arising?
Journal – self reflection

• What makes you say…
• What are the reasons for…
• What if…
• What is the purpose of…
• How would it be different if…
• Suppose that…
• What if we knew…
• What would change if…
**Additional resources and readings**


Contact

Glenn Amezdroz
Principal Education Officer
Review and Transition Branch
Phone: 3864 0334
Email: glenn.amezdroz@qcaq.qld.edu.au