

The Centre for Teaching and Learning
Presents:

Constructing Curiosity

Inquiry-Based Learning

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Learning Specialist

The (brief) History of IBL

- McMaster University 1980's
- Inquiry defined as “self-directed, question-driven research” (p. 7)
- Goal for discipline-specific *and* lifelong learning
- Introduced as 2, full-year courses (20%) and optional 3rd year course
- Teacher as guide and collaborator

Risk & Trust
(Archer-Kuhn & MacKinnon, 2020)

FORMULATE QUESTION
Structured, Guided, Open

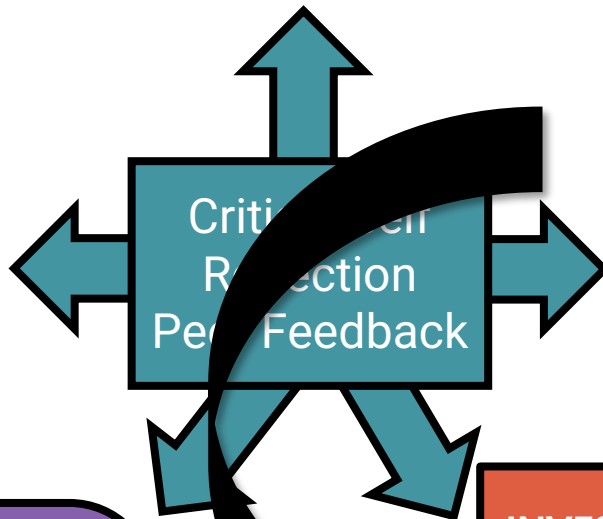
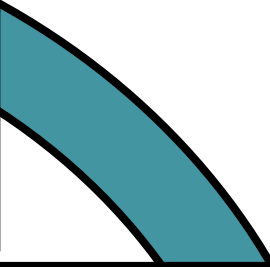
EXPLORE
seek out evidence; engage with various resources

CONCLUSION/FINAL REPORT
Presentation of findings.
Critical self-reflection on the process of engaging IBL; what did you learn and how did you learn it?

CRITICAL ANALYSIS/SYNTHESIS
Integrate evidence with your experience, values, and circumstances.

Critical Reflection
Peer Feedback

INVESTIGATE
Critically analyze evidence; evaluate for strengths/weaknesses.



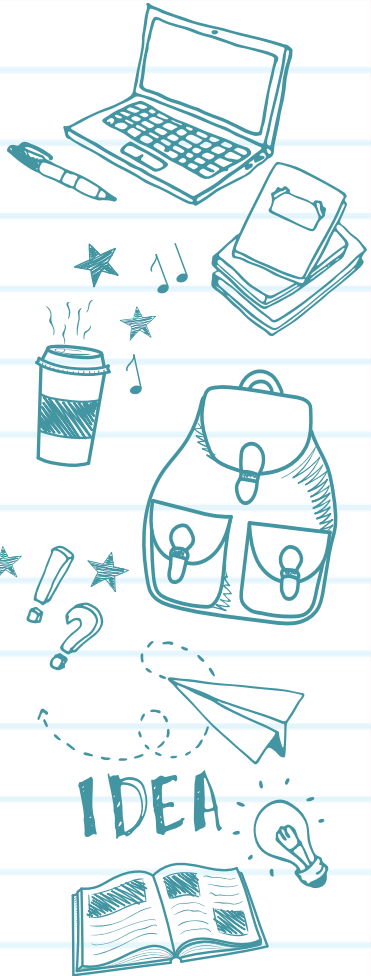
Types of IBL:

- Different levels depending where *you and students* are at with understanding inquiry
- Teacher as Leader/Facilitator vs. Teacher as Guide
- Typically developed around selection of topics/choices to inquire about vs. inquiring about curriculum level
- High level of support vs. Enabling students to take more risks
- Often the goal is to shift from structured to open inquiry as students develop key skills

Structured

Guided

Open



Checking In

Right now, I am feeling...



happy



angry



jealous



scared



awesome



silly



frustrated



surprised



shy



disappointed



confused



impatient



nervous



proud



grumpy



excited



curious



sleepy



sad



sick



embarrassed



worried



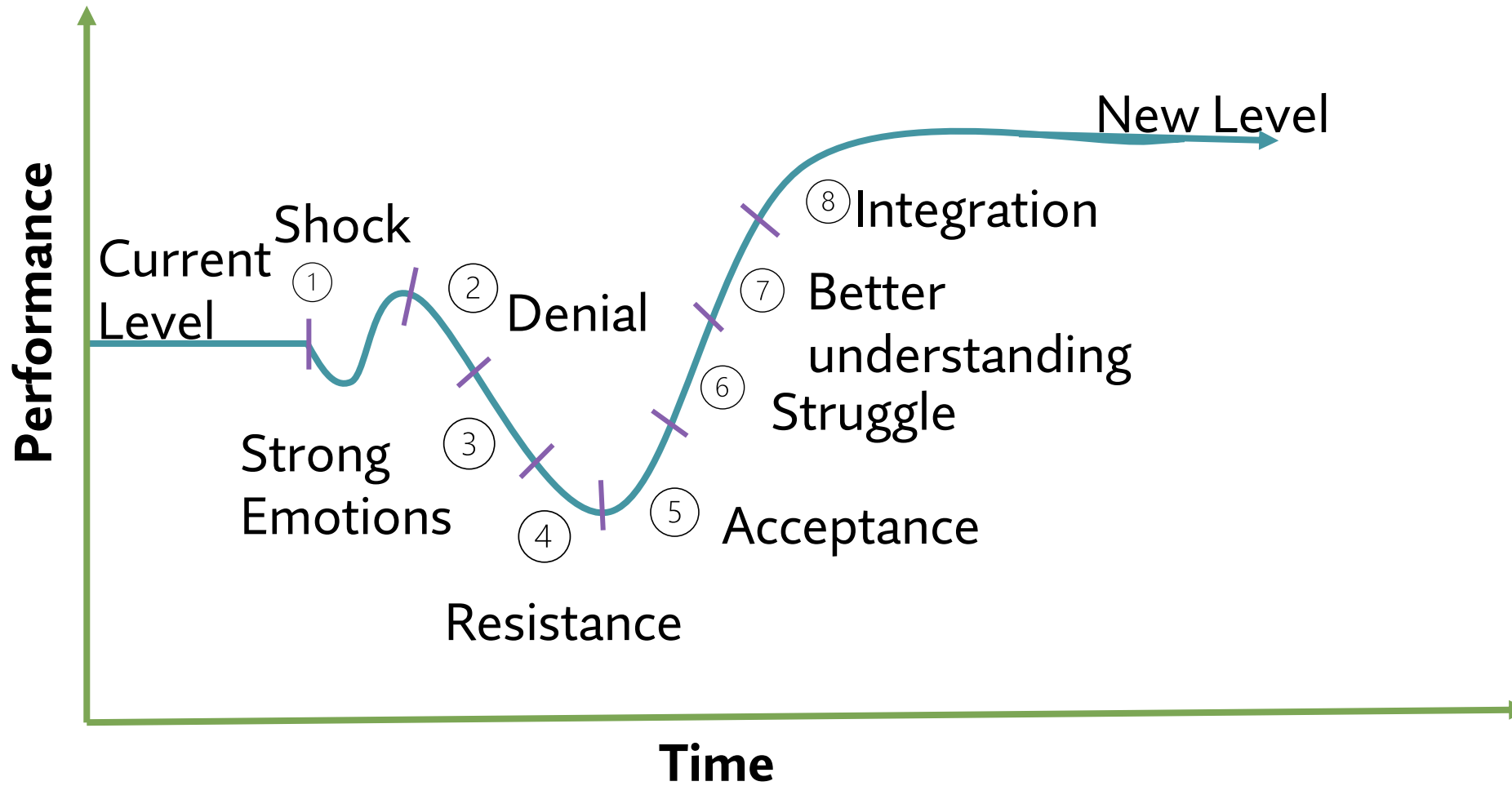
hurt



confident

mindful PE TEACHER

The Grieving Process (Curve)



When engaging with a new pedagogical approach, students will often go through the grieving process.

Be mindful of student well-being.

Why inquire?

Why not?

- Opportunities to adapt and respond to a changing society (Summerlee & Murray, 2008)
- Supports development of theory into practice (Linn & Jacobs, 2015)
- Promotes critical thinking skills (Summerlee, 2018)
 - Reasoning skills
 - Engagement of knowledge and use of resources
 - Communication and group work skills
 - Assessment and evaluation skills



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Open Inquiry

- Least amount of **guidance** for students
 - Students pick the **topic**
 - Still requires a high level of support
- When students have not engaged in IBL, you may consider Structured or Guided first
 - Teacher **defines** or **guides** the topic

Creating In Q



“Good” or Level 3 inquiry questions...

- Facilitate more questions
- Not closed-ended
- Make you think critically
- Require more than 1 resource to answer



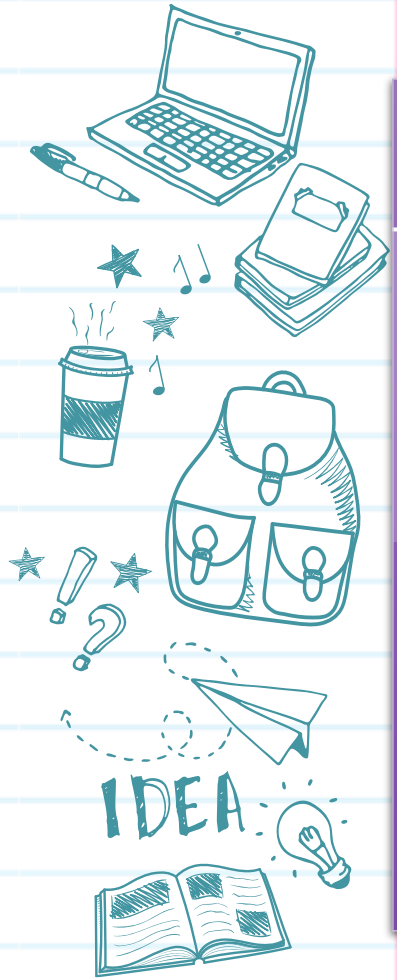
(adapted from Kelsey Barker, 2017)

Developing Your Inquiry Question

- What are you interested in...
- For approximately 4-minutes write a Level 1, 2, and 3 question as it pertains to your topic

Creating Inquiry Questions

| Level 1 | Level 2 | Level 3 |
|---|---|---|
| What is...? When did...? How many...? | What happened...? How do they compare...? | What evidence...? What can we infer? If...,then...? |
| Name Identify Define List | Explain Analyze Reason Sequence | Evaluate Predict Judge |



(adapted from Kelsey Barker, 2017)

Refining Question:

- **In your group:** Present your topic and your curiosity about it.
 - Identify your Level 1, Level 2, and Level 3 questions
 - The group's responsibility is to assist you in determining
- Is your Level 3 question your “best question”? Does it need further refinement? OR can your Level 1 or Level 2 question be further refined to become your Level 3 question?

Each person should present their topic and questions for about 2-3 minutes and then receive 3 minutes of feedback = 5 minutes each

**You should
now have
your inquiry
question.**

Checking In

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happy



angry



jealous



scared



awesome



silly



frustrated



surprised



shy



disappointed



confused



impatient



nervous



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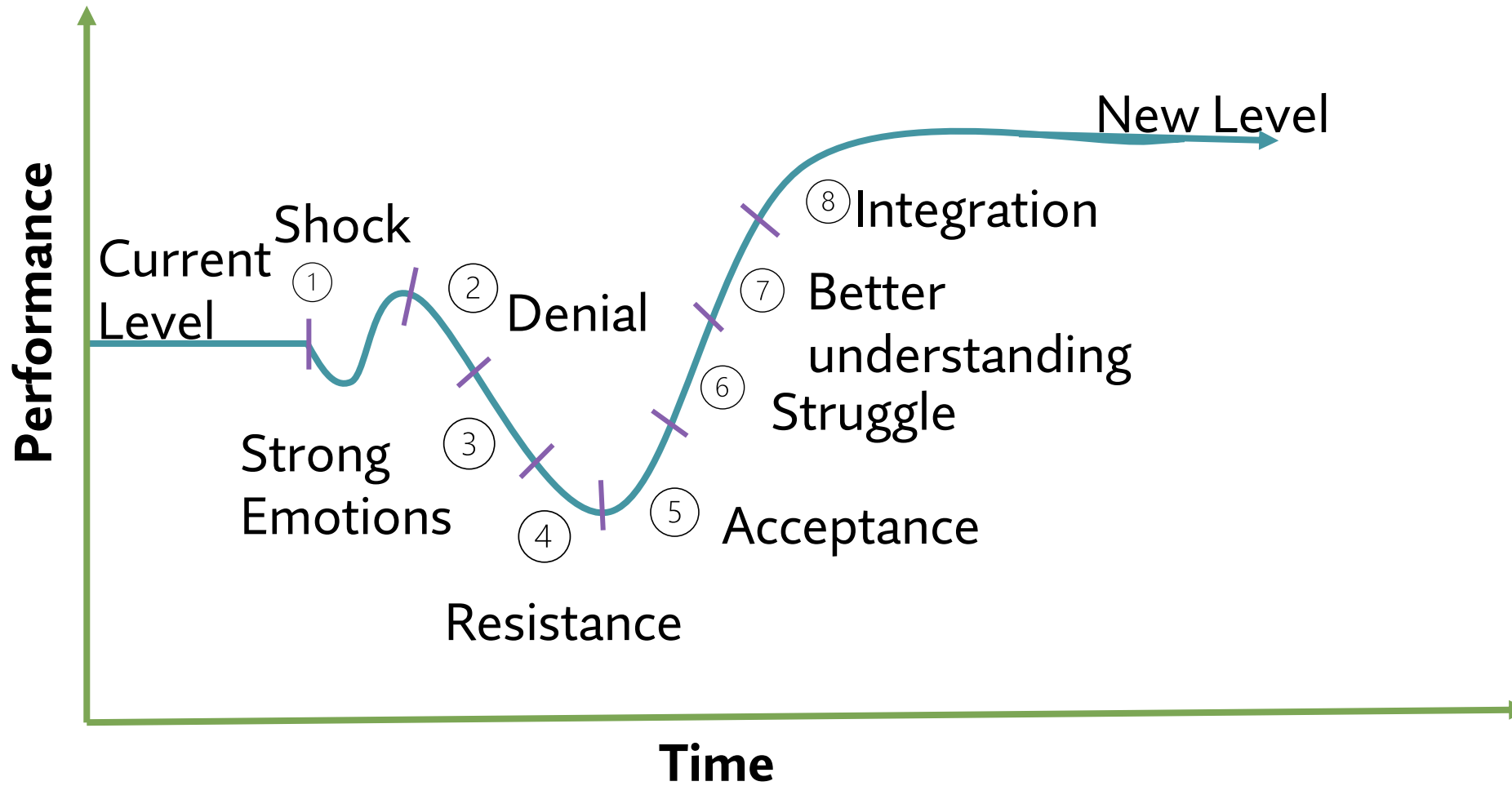
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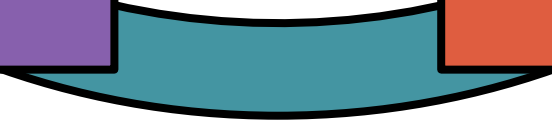
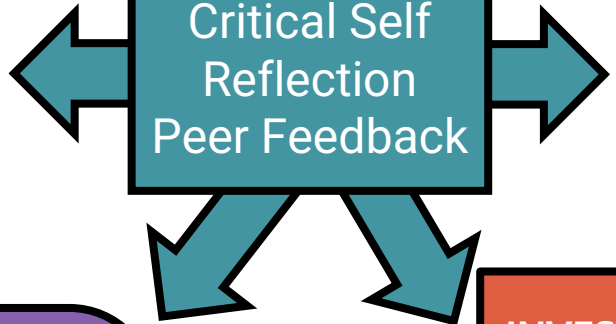
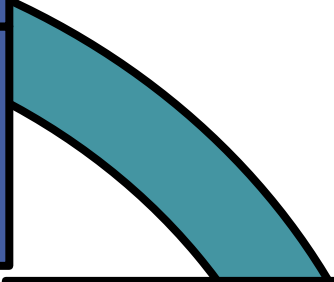
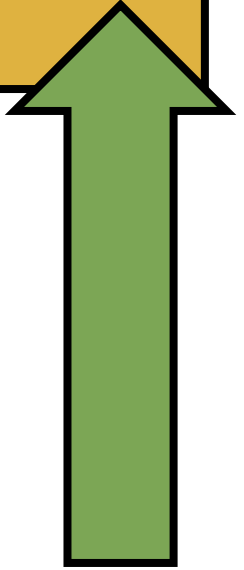
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Explore the Literature

1. Based upon your question, scan literature (using abstracts) to find 2 articles that *begins* to answer your question.
2. Try to find 2 different types of literature (e.g., quantitative, literature review, qualitative)
3. Begin putting information into the literature review chart

Take about 8-10 minutes

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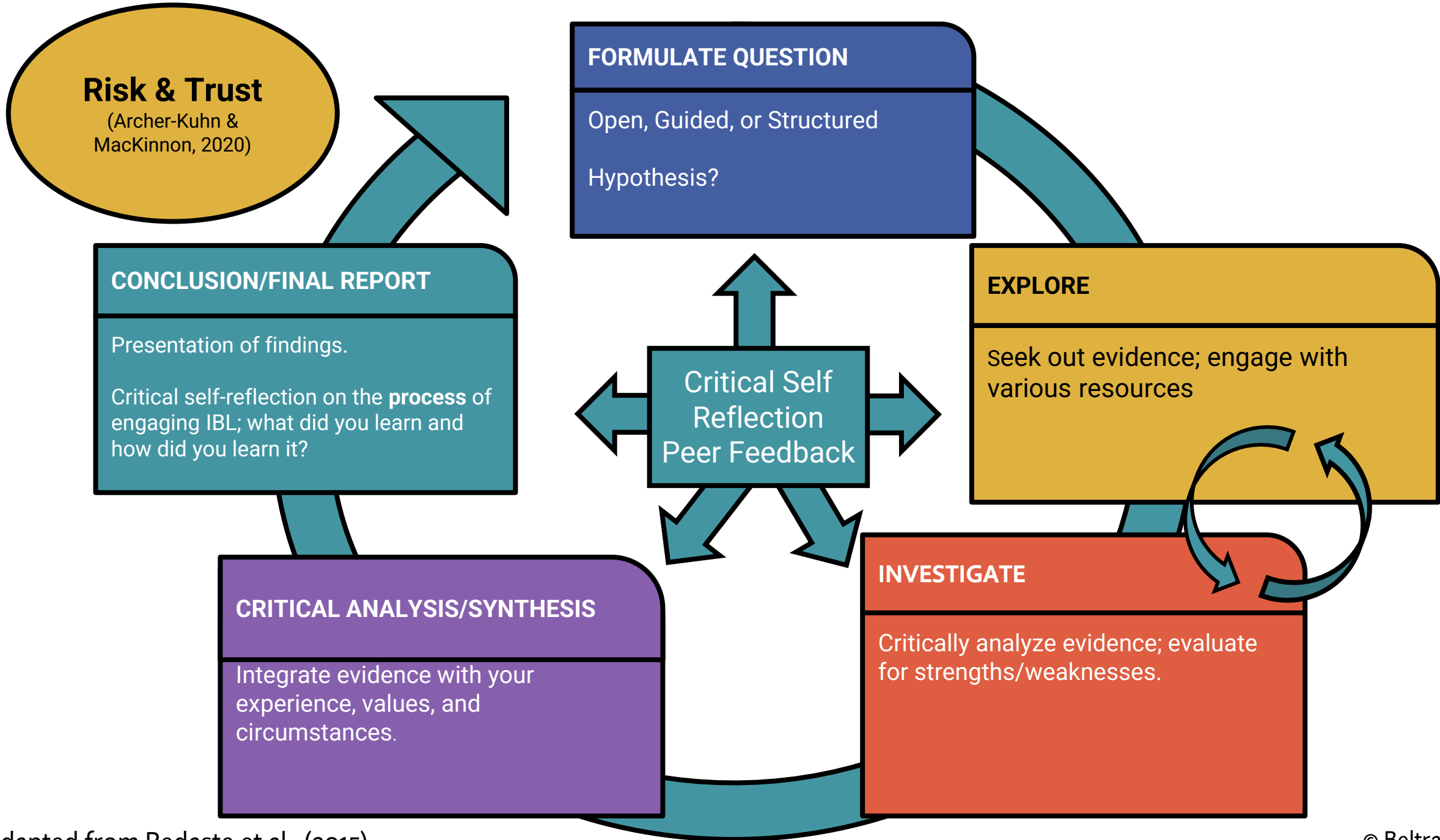
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Investigating the Literature

Use the check-list
to guide your
feedback and
questions.

1. Remind your group of your Level 3 (final) question.
2. Share your 2 articles that you found; what did you learn – provide an overview of the articles.
3. Peers are to provide feedback and clarifying questions
4. What more do you need to know to help you answer your **inquiry question?**

Take 5 minutes each person



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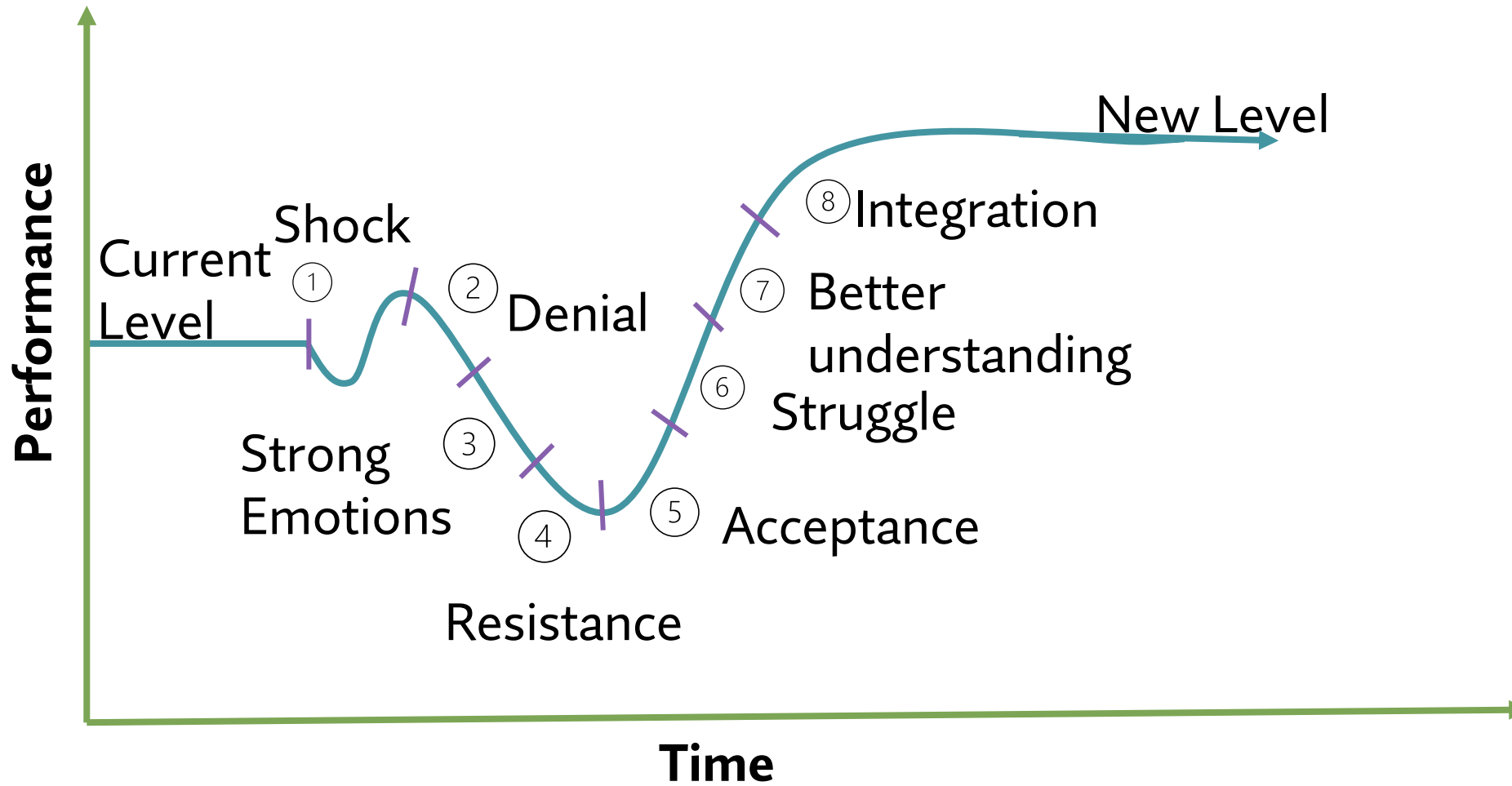
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Critical Analysis & Synthesis

- How do your values, experiences, and beliefs integrate with the evidence you reviewed?
- What about the peer feedback you received?
- How does this all come together for you?

Take 3-minutes to write (and keep writing) about your experiences

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Benefits of IBL

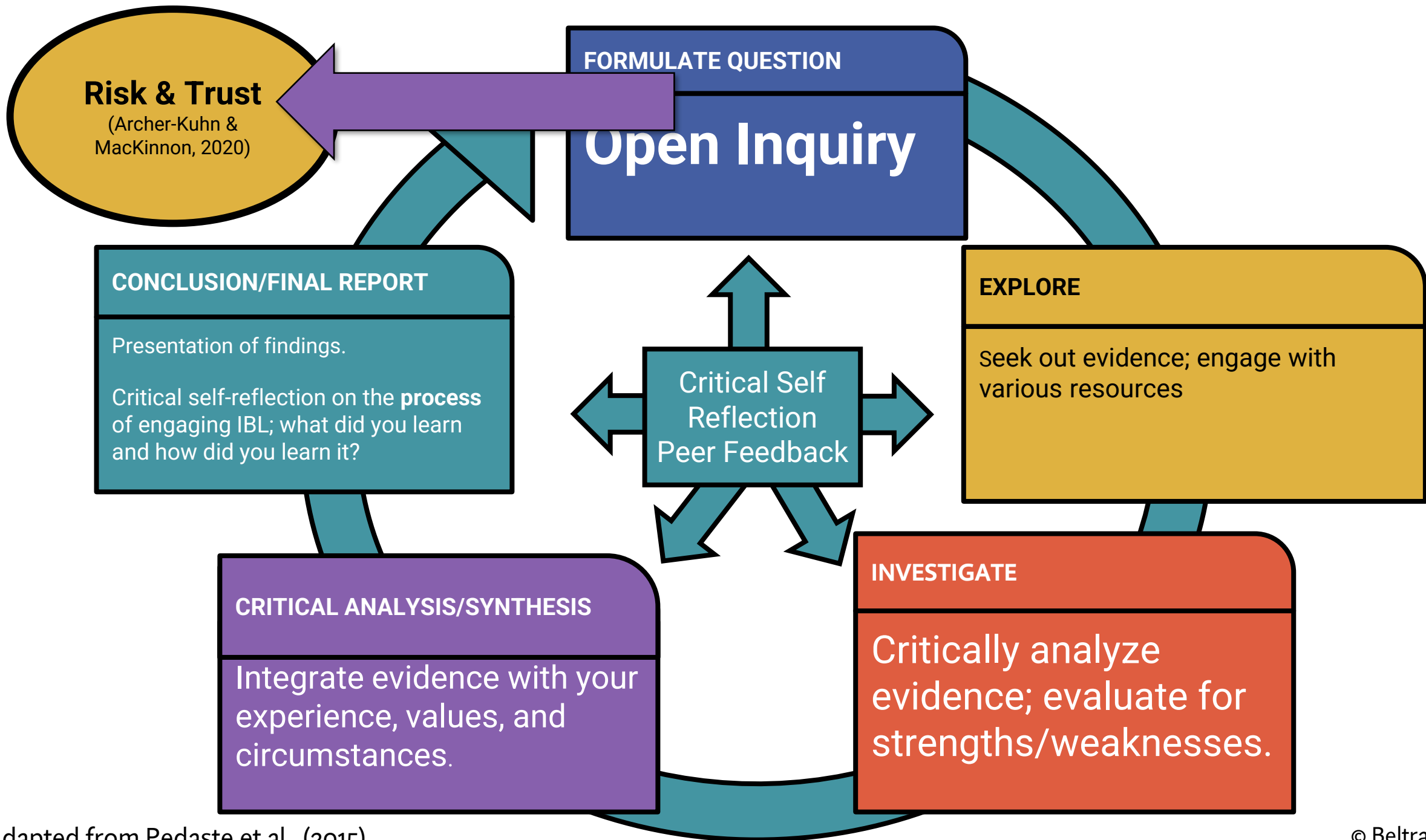
IBL as Critical Pedagogy:

“Belief in the inter-relation between education and society, and a commitment to change in education and society to ensure greater social justice,”

(McArthur, 2010, p. 495)

- Allows for flexibility
- Student-driven
- Scaffolded
- Promotes critical self- and peer-feedback
- Helps students embrace the challenges of new learning
- Collaborative: students learn from each other, and teachers learn from students

(MacKinnon & Archer-Kuhn, 2022)



Trust:

- Between students
- Between students and teacher
- The process
- The institution (or department)

Risk :

- Providing too much guidance or structure
- Students experiencing and responding to high level emotions
- Making mistakes (and embracing them)

(Beltrano et al., 2021)

Questions? Ideas?



- How can you apply IBL in a class?
- In curriculum?
- For an entire semester?
- What are your worries?

References

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