

FROM ARTIFICIAL INTELLIGENCE TO ASSESSMENT INNOVATION: TOWARD A MORE HUMAN FUTURE FOR ASSESSMENT RESEARCH AND PRACTICE

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Clear is kind.

– Brené Brown





AI has magnified an already present challenge in our assessment systems:

The need for more human assessment practices in schools.



METAPHORS OF CHANGE











AI represents an opportunity for

Change

- Development of existing practice, often for the better
- Imposed or necessary

Innovation

- Novel, creative or new
- Intentional

Innovations stem from challenges



***What is the
assessment challenge
we face?***



Assessment as Challenge

- Assessment has been recognized as a primary barrier to instruction and learning, operating in a dilemmatic space (Pasquini & DeLuca, 2021; Fullan, 2014)
- Assessment involves a series of “knotty problems” (Brown & Harris, 2016, p. 512)



Assessment as Challenge

- Teachers face multiple competing priorities due to inconsistencies within accountability paradigm (Singh et al., 2015)
- Assessment is a socially-mediated process (Brown & Harris, 2016); across vertical (policy) and horizontal (practice) knowledge systems (Bernstein, 2000, 2003; DeLuca, 2023; McMillan, 2013)

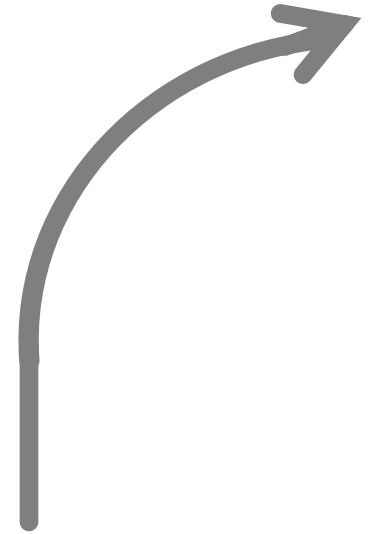


**What is the specific
challenge we now face?**



Historical Patterns and Priorities of Assessment

- Individual assessments
- Disciplinary content knowledge (Epistemic)
- Test-based
- Compare, sort, stream & select (students & systems)
- Shaped by discourses of accountability, standardization and standards



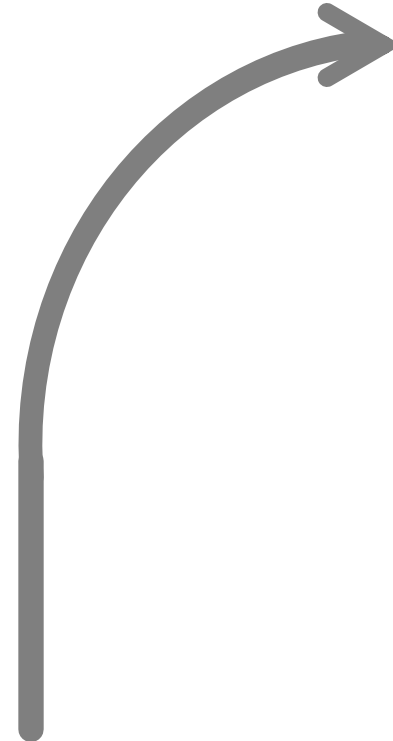
How fit are these legacy patterns and priorities of assessment for preparing students to ensure our collective sustainability?

The Challenge Before All of Us

We owe it to the next generation to do better. Instead of an excessive preoccupation with how to raise standards, we should research how standards impact the future, who sets the standards in the first place, for whom and why. What is the purpose of discussing standards, if they do not address the dire problems in front of us and assess what matters the most; curriculum for sustainability, democracy, equity, creativity, compassion, ethics and the wisdom to meet climate change and other global challenges with hope and resilience.

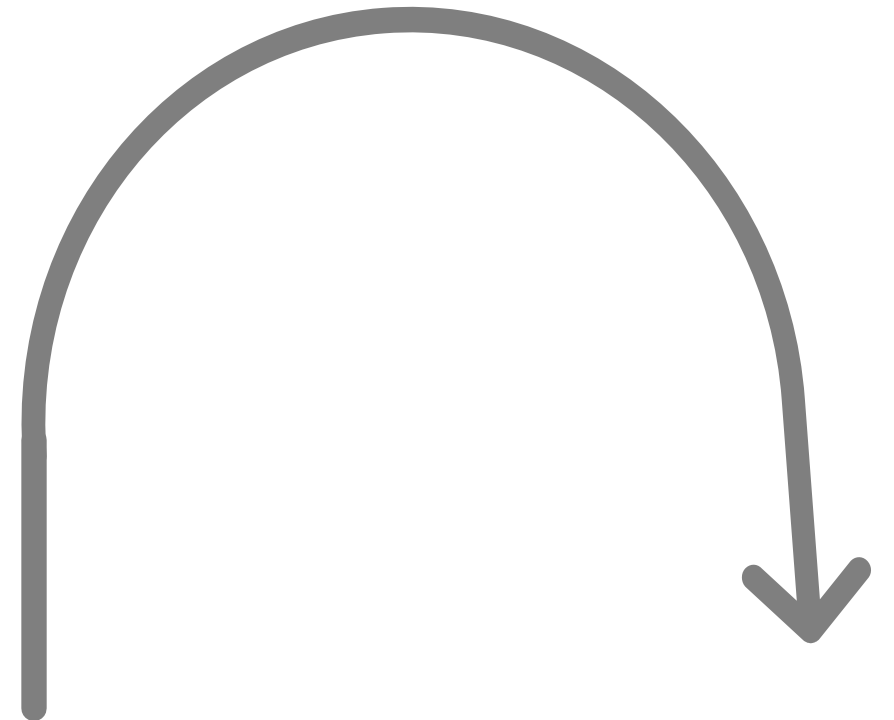
What Would this Mean?

- Address global challenges by preparing and assessing students' transferable skills and **global competencies** (OECD, 2018)
- Integrating **new technologies** into learning and assessment processes
- Counter inequities through education and assessment to support **more inclusive, socially-just societies**

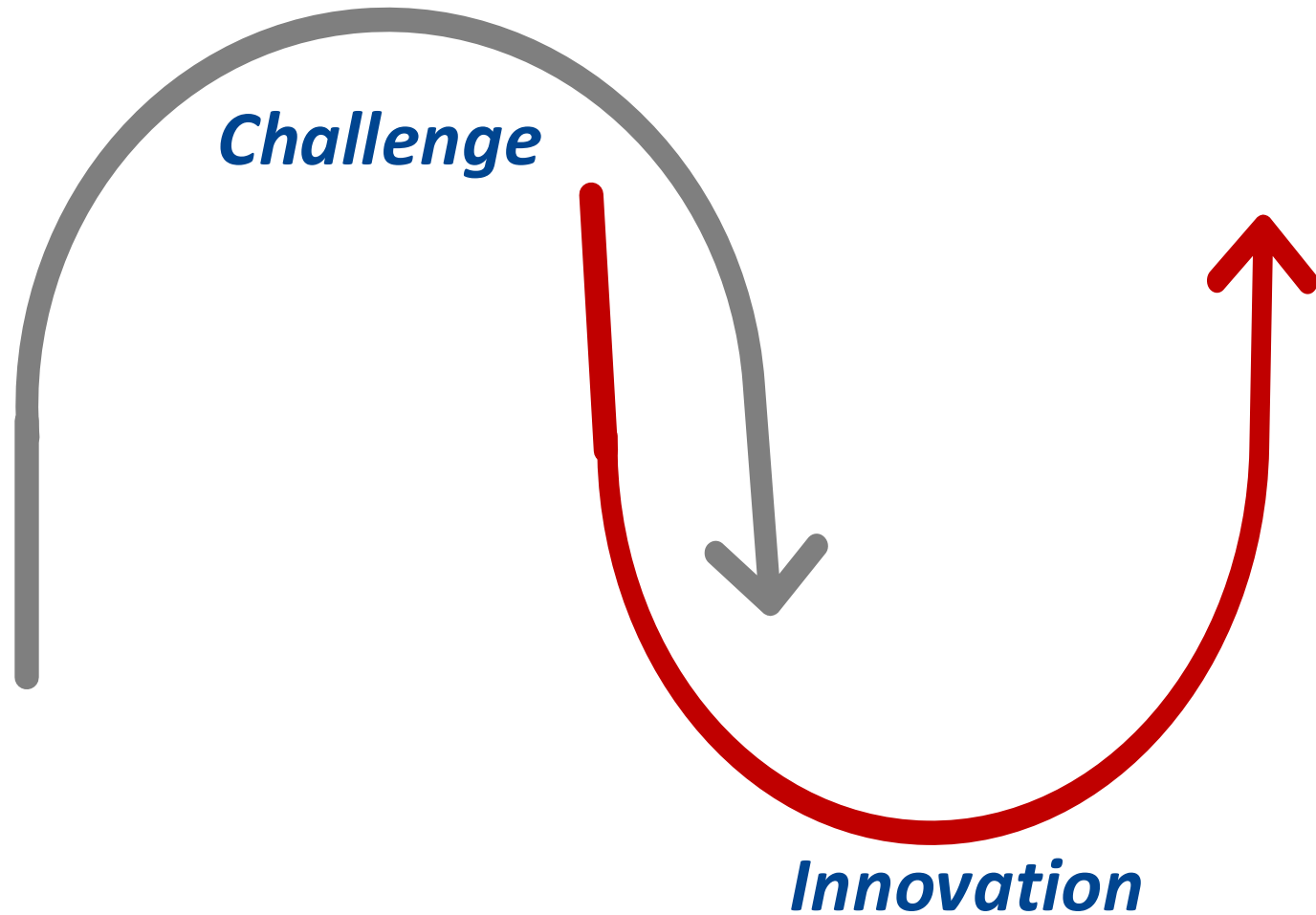


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From Challenge to Innovation



Future Vision of Learning & Assessment

- Collaborative & Co-designed (ontological)
- Community-based
- Creative and critical
- Connect humans with technologies
- Discourses of
 - *Relational* (Learning with, for, and about others)
 - *Social Responsibility* (Care and Justice for Self, Others, Community)
 - *Interdisciplinary Knowledge & Global Competencies*

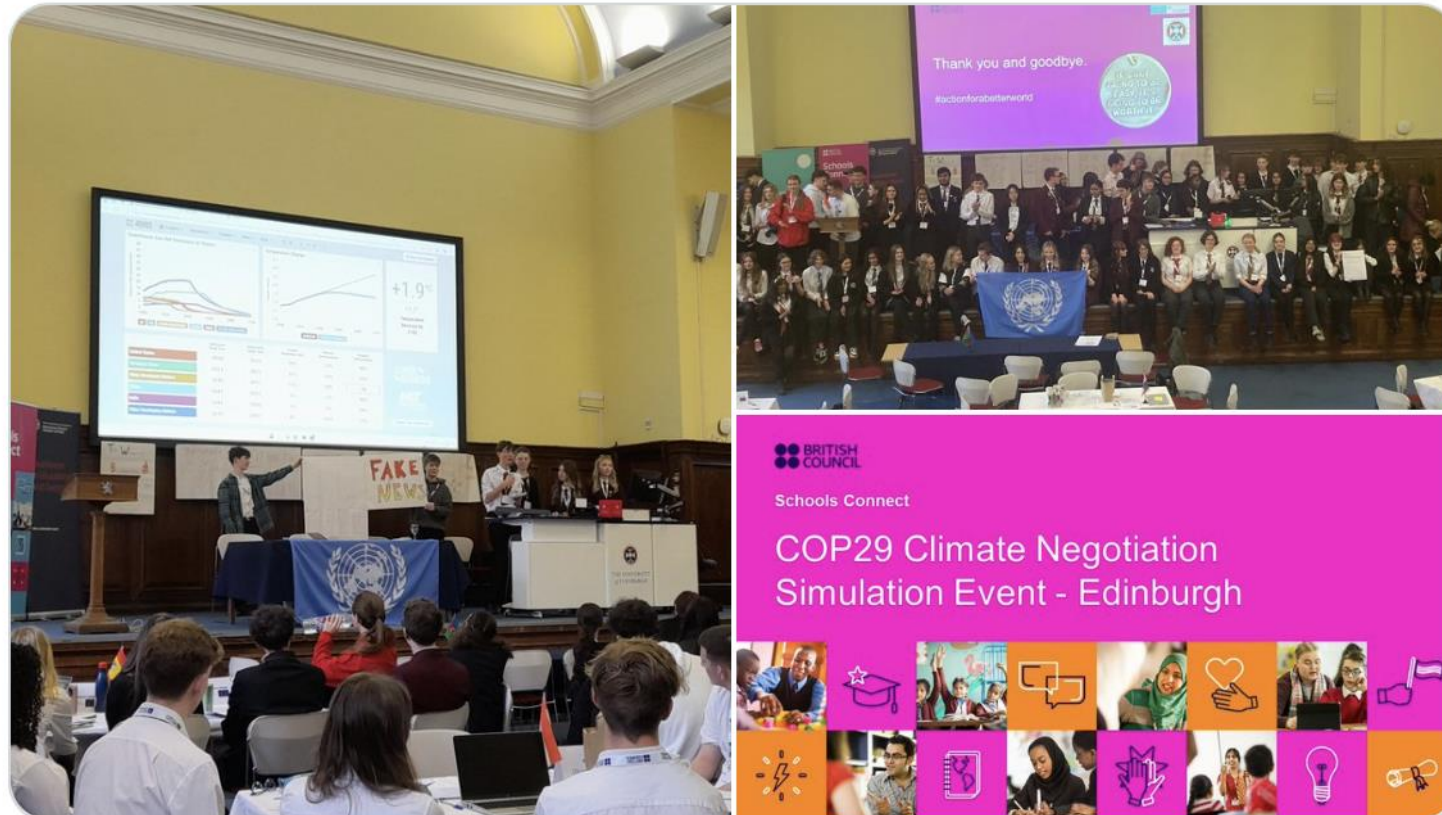


Learning for Sustainability Scotland

@LfSScotland



Amazing vibe today as pupils from @EastAyrshire, @Edinburgh_CC, @scotborders and @LoveWestLothian gathered to take on the roles of #worldleaders and debate the #ClimateCrisis. More on our website soon! @BCScotland @EdinburghUni @MorayHouse @ScotGovNetZero @ScotGovEdu @EdScotLFS



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From Challenge to Innovation

Legacy Vision of Learning & Assessment

- Individual
- Test-based
- Disciplinary knowledge
- Compare, sort, stream & select
- Accountability, standardization and standards

Challenge

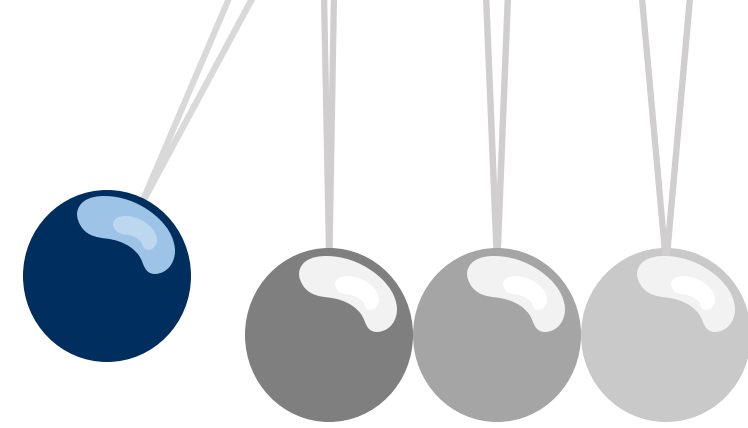


Innovation

Future Vision of Learning & Assessment

- Collaborative & Co-designed
- Community-based
- Creative and critical
- Connect humans with digital technologies
- Relational, Social Responsibility, Interdisciplinary Knowledge & Global Competencies

Teachers as Agents of Innovation



Research shows sustained changes are most effectively advanced via teacher-led innovations (Hargreaves, 2004; McNamara & O'Hara, 2004; Tschannen-Moran, 2009)

Innovative teachers offer solutions to challenges and influence the practice of other teachers (Farias et al., 2010; Singh et al., 2015)

Are educators ready to innovate?

On average across the OECD, approximately $\frac{3}{4}$ of teachers agree or strongly agree that most teachers in their school...

- “strive to develop new ideas for teaching and learning” (79%)
- “search for new ways to solve problems.” (77%)

OECD Research & Innovation in Education, 2023

How is innovation achieved?

OECD recognizes that “innovation is critical to the continuous improvement of education,” what remains unknown is:

1. How does innovation emerge?
2. How can it be brought to scale and sustained?
3. What are the barriers and drivers for innovation?
4. What can governments do to enable a supportive climate for innovation to emerge and to drive innovation?

A Study of Systematic Assessment Challenges & Teacher Innovation



What are the foundational challenges teachers face to their assessment practice?



How do teachers innovate towards assessment challenges?



**From challenge to innovation:
A grassroots study of teachers'
classroom assessment innovations
DeLuca, Holden, & Rickey, 2024.**

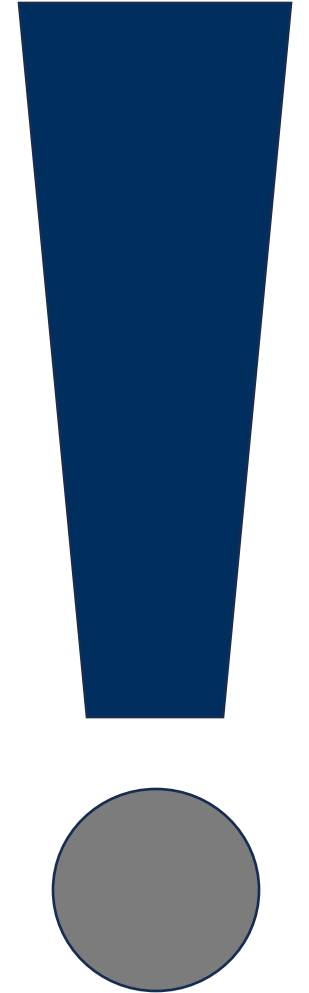
Approach & Participants

- 168 survey responses from K-12 teachers
- 3 Part Survey
 - Demographics
 - Assessment Challenges
 - Innovative Responses
- Varying years of teaching experience (mean = 14.7)
- 11 countries (predominantly Canada, US, UK, AUS, & NZ)

Systemic Challenges

1. Integrating *technology purposefully* into teaching and assessment.
2. Overcoming the *grading obsession* in schools to promote a learning culture.
3. Using assessment to overcome *persisting inequities* for diverse learners.
4. Balancing *conflicting values* in classroom and large-scale assessment.
5. Combating *reporting overload* by prioritizing learner-centred versus accountability-driven assessment.

How do teachers **innovative**
towards assessment
challenges?

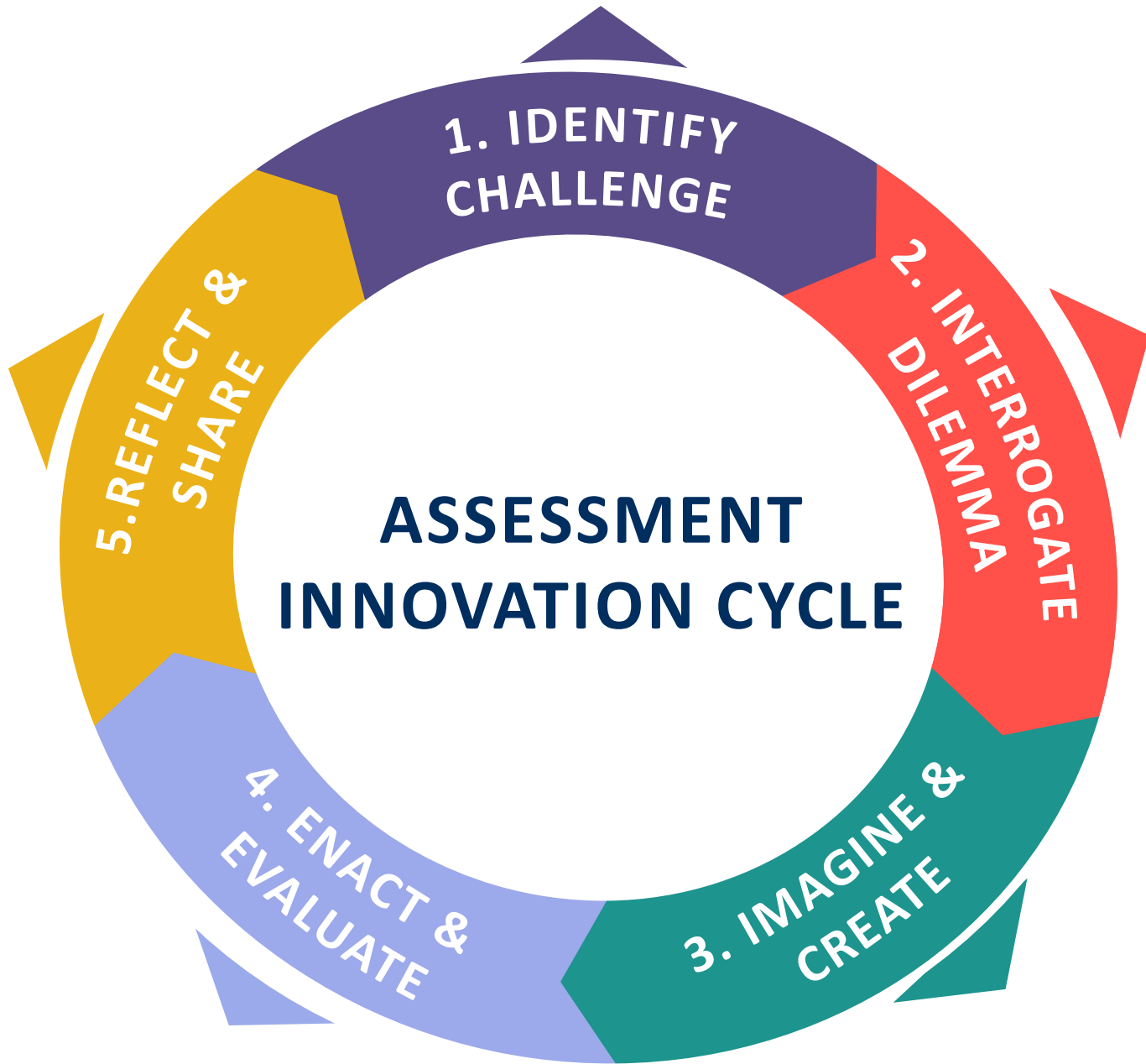


Defining Assessment Innovation



Assessment innovations involves educators in addressing assessment challenges and their underpinning dilemmas to advance teaching and learning by implementing and experimenting with creative ideas that are new in-context.

...How is this achieved?



**ASSESSMENT
INNOVATION CYCLE**

1. IDENTIFY
CHALLENGE

2. INTERROGATE
DILEMMA

3. IMAGINE &
CREATE

4. ENACT &
EVALUATE

5. REFLECT &
SHARE

1. Identify Challenge

2. Interrogate Dilemma

Identify Challenge

A disruption to or problem of practice; may be isolated to one area or more widespread.

Interrogate Dilemma

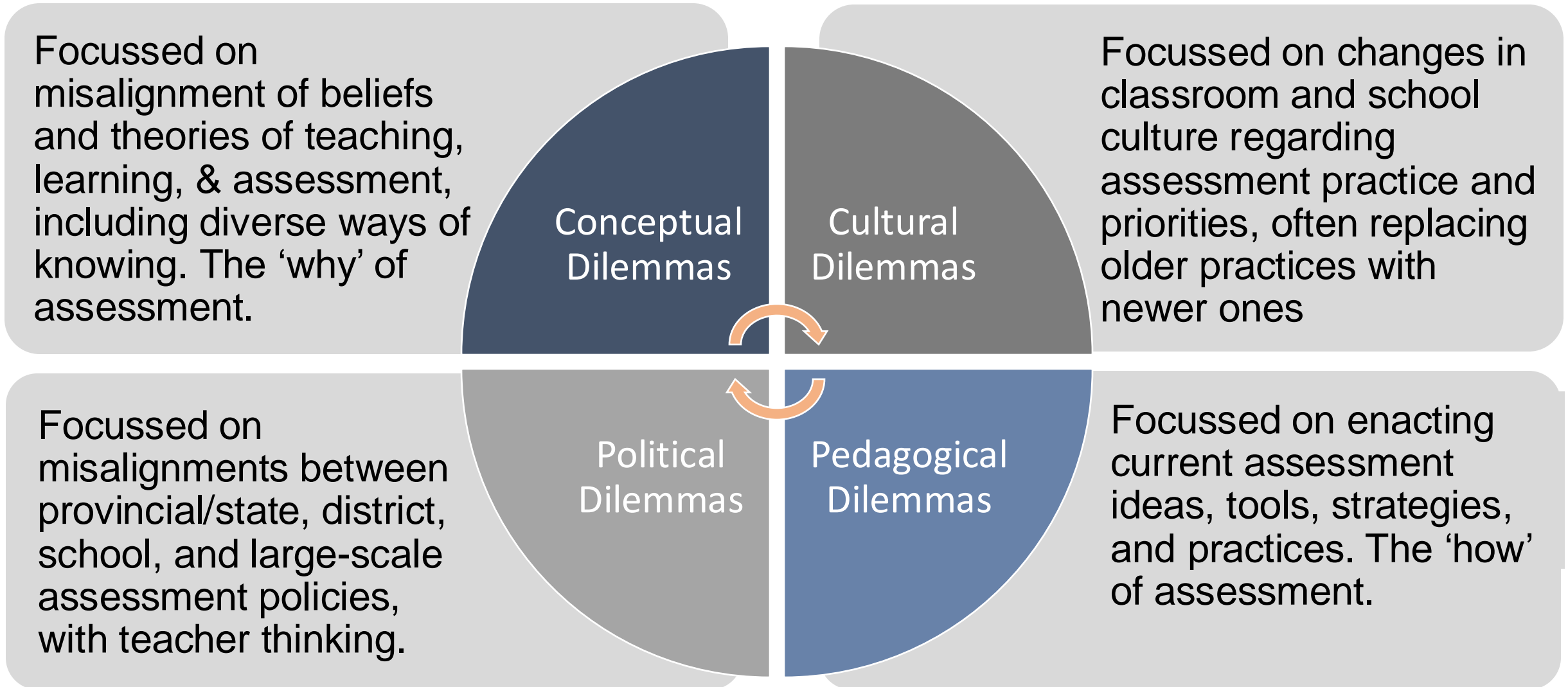
Reflection on challenge, and how it connects, aligns or misaligns with broader assessment and teaching beliefs, theories, policies, and norms.

Dilemmas yield multiple decisions and options leading to potential innovations. (Farias et al., 2010; Pope et al., 2009; Singh et al., 2015)

Challenges can become dilemmas



2. Interrogate Dilemma: Types of Dilemmas

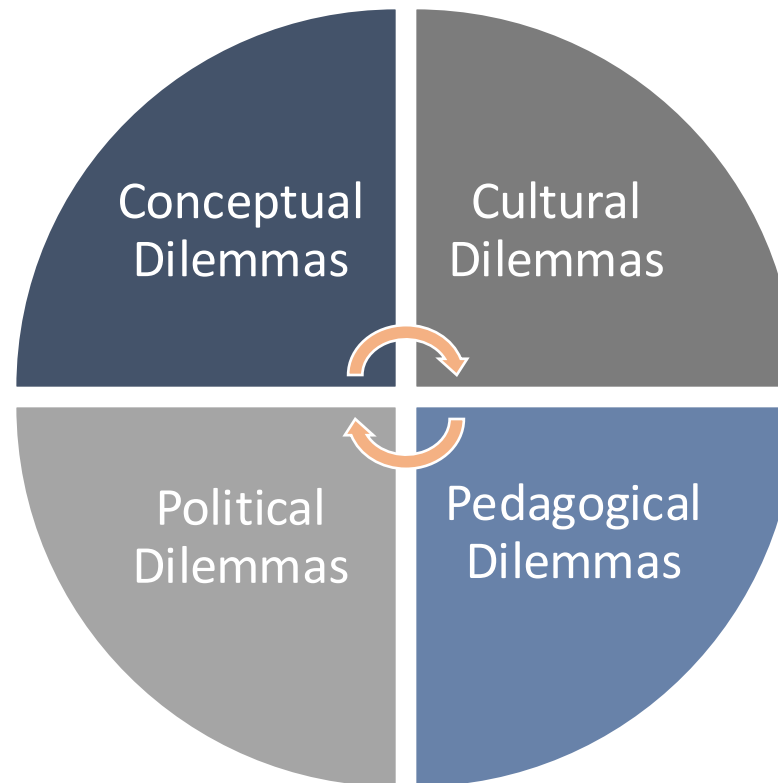


Challenge: Technology Advances

Challenge: Integrating *technology purposefully* into assessment; specifically, *how to address the impact of AI on assessment and assessment integrity.*

Dilemma

What type of dilemma?



Underpinning Dimensions

Academic Integrity/Cheating

Lack of Personal Interaction/Human Engagement

Lack of Formative Opportunities

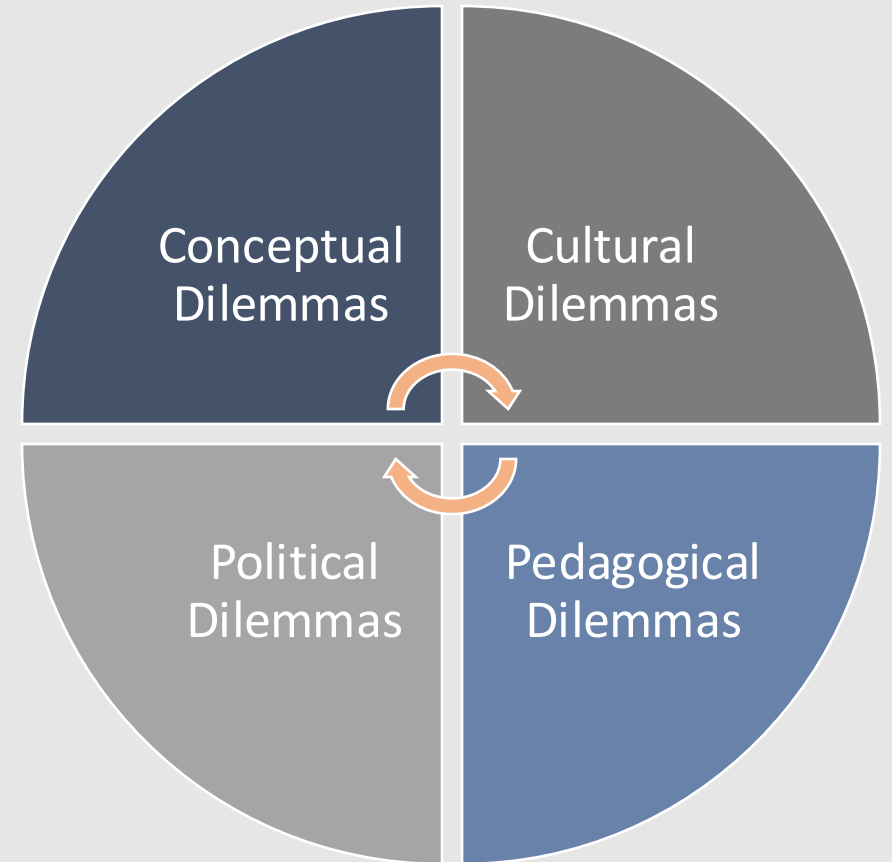
Data Privacy and Security

Bias and Fairness

Cost and Accessibility to AI

Dependence on Technology

Ethical Concerns



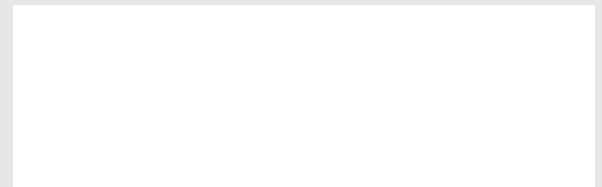


Teachers' Innovative Responses

3. Imagine & Create

4. Enact & Evaluate

TOWARD A MORE HUMAN FUTURE FOR ASSESSMENT



Teachers' Integration of AI in Classroom Assessment



1. **Verify:** Students verify output from AI tool for misinformation or false sources.



2. **Connect:** Students make connections between the AI response and their personal interests and/or experiences.



3. **Extend:** Students extend their work to include connections with **community**, **collaborations**, and **creativity**: *engaging in uniquely human facets of learning*

AI across Classroom Assessment Processes

Be explicit about the role of AI in learning goals

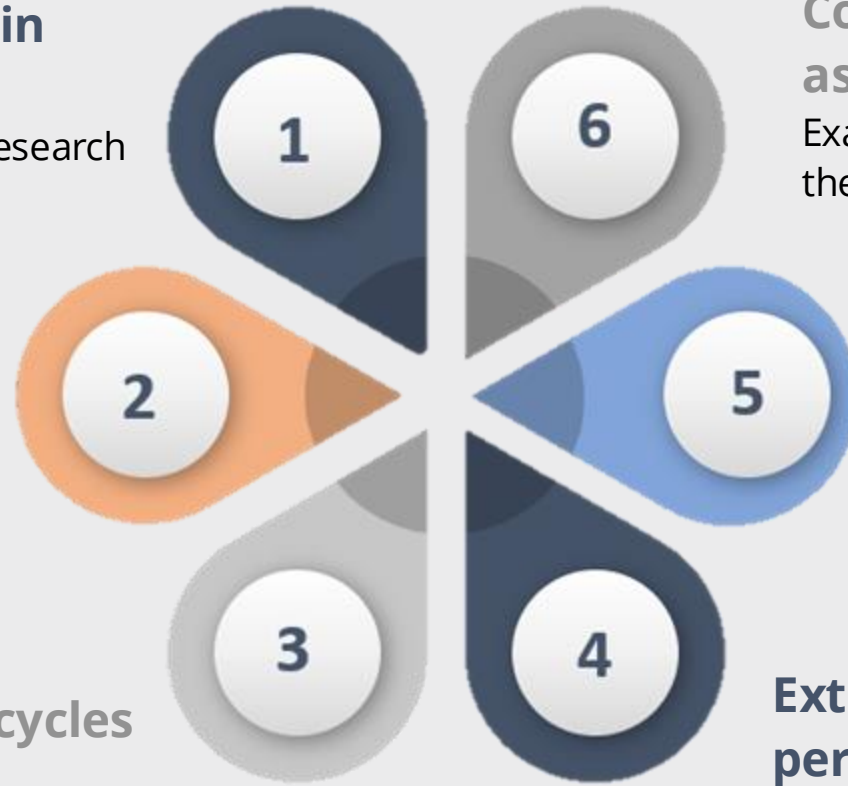
Example: If the learning goal is to write a research essay, be explicit that students can use AI as a research tool to identify key points.

Co-design assessment criteria with AI in mind

Example: Describe how AI is used across levels (how is A-level performance different from C-level performance?).

Engage students in feedback cycles and peer/self assessment

Example: Invite students to peer review their essays and comment on how they have used/ modified their work based on AI's suggestions.



Co-construct evaluations via assessment conversations

Example: Invite students to comment on their performance and use of AI.

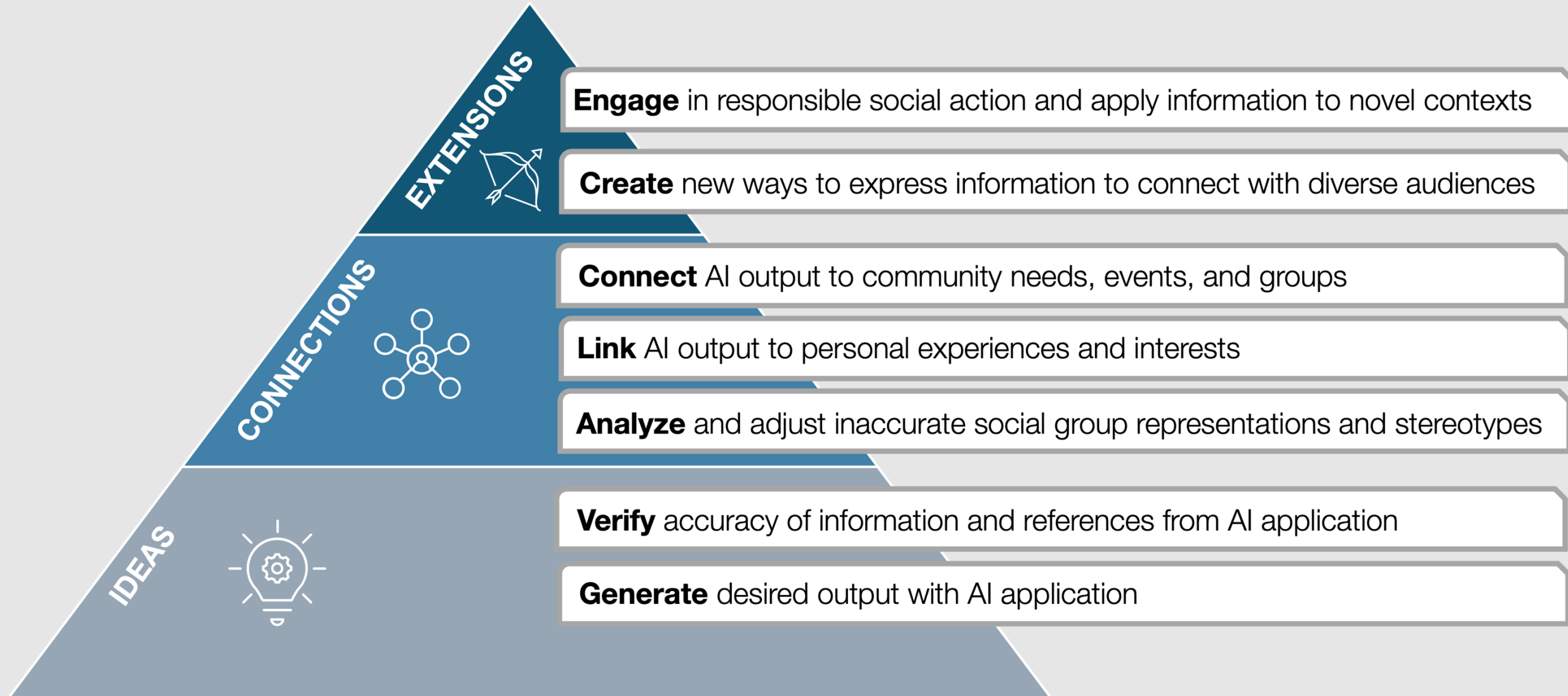
Use authentic community-based tasks

Example: Embed tasks in local community context and invite students to make real-world or industry connections.

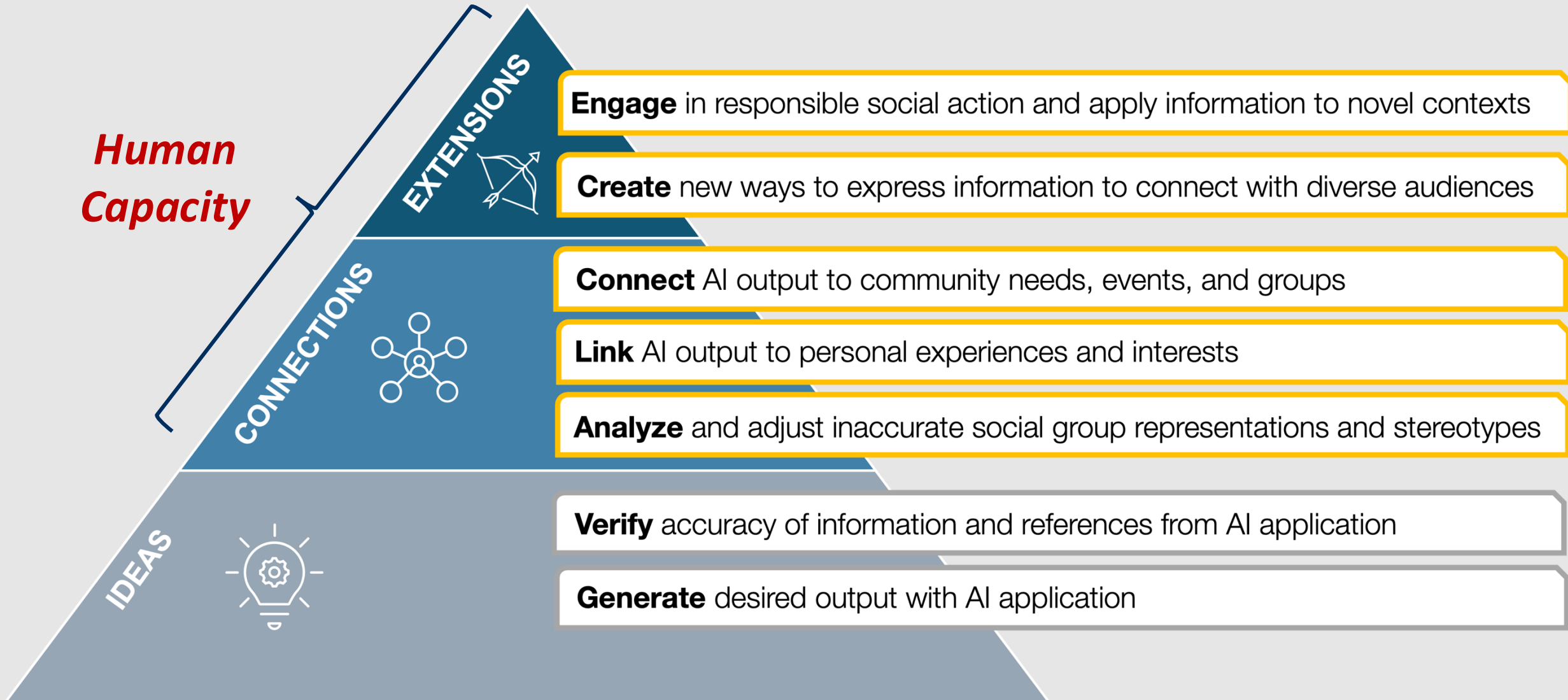
Extend learning through performance tasks

Example: Invite students to represent their essay ideas in an alternative modality that's used in your field (e.g., poster, design sketch, podcast).

AI Competencies for 21st Century Classrooms



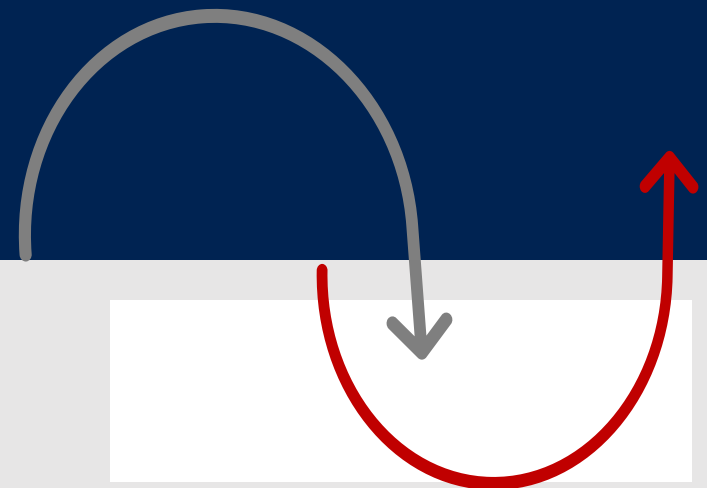
AI Competencies for 21st Century Classrooms



AI as Incitement for a More Human Future of Assessment

Requires....

- > Embrace a paradigmatic shift in how and what we assess
- > Addressing deeper fundamental assessment challenges
- > Empower teachers to be agents of innovations



Empowering Teachers to be Innovative in Assessment Starts in Teacher Education Programs

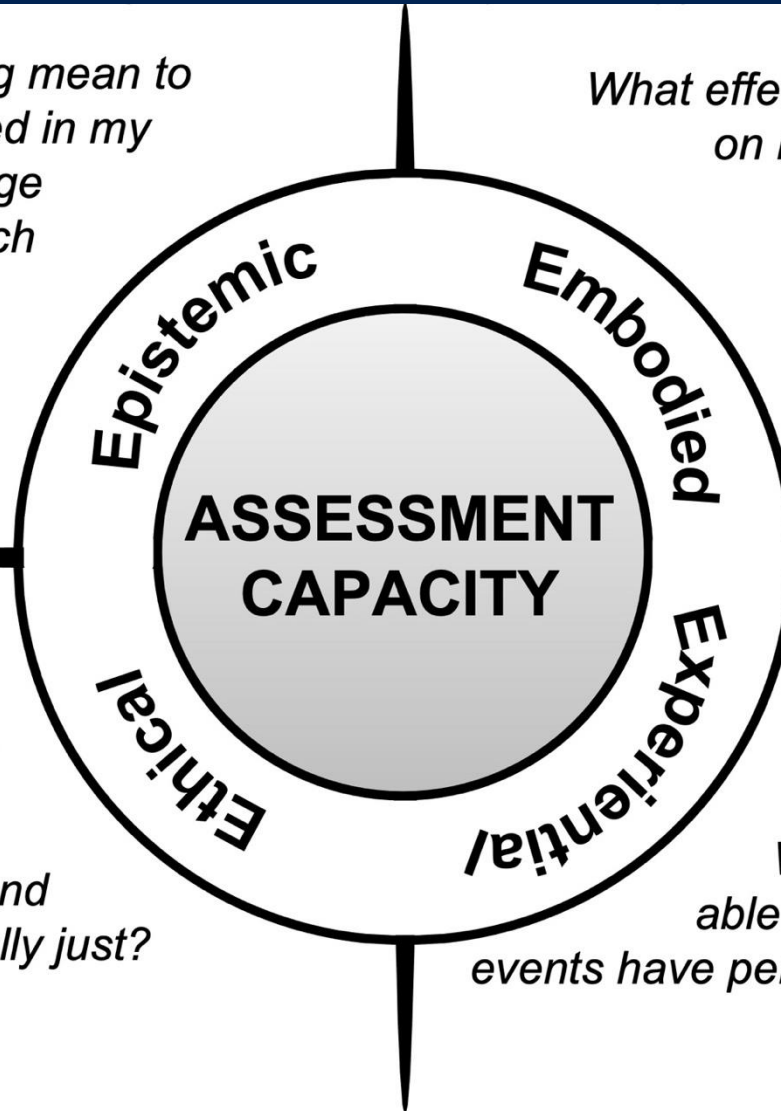
Thinking the Unthinkable: A Framework for Teacher Assessment Capacity

What do learning and knowing mean to me, and how are they reflected in my assessments? What knowledge systems underpin my approach to assessment?

- Awareness
- Curiosity
- Empathy

- Awareness
- Identity
- Social Justice

Are my assessment actions and decisions fair for all and socially just?



What effects does the assessment have on me emotionally and physically, and how do I deal with it?

- Awareness
- Acknowledgement
- Reflexive Agency & Action

- Awareness
- Know-how
- Co-agency

What assessment actions am I able to implement, and why? What events have persuaded me to act in this way?

Book:
*Learning
to Assess*



The future of the



world



is in my



school

today



Thank You



References & Resources

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