

# Low threshold interdisciplinary encounters – why and how?

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# Outline of this talk

A promising learning activity that is structured to bring about integrative competencies and doesn't need formal module modification.

1. Background and rationale
2. Activity design to scaffold learning
3. Activity in practice
4. What we've learned
5. Next steps.

# Background – the need for low threshold interdisciplinary activities

- Strong existing emphasis on interdisciplinary research.
- Local policy to embed Education for Sustainability into curricula.
- Interdisciplinarity in competency development is key to sustainability.
- In the middle of another big curriculum transformation project.
- Re/designing entire curricula for interdisciplinarity is operationally complex.
- High autonomy in each faculty.

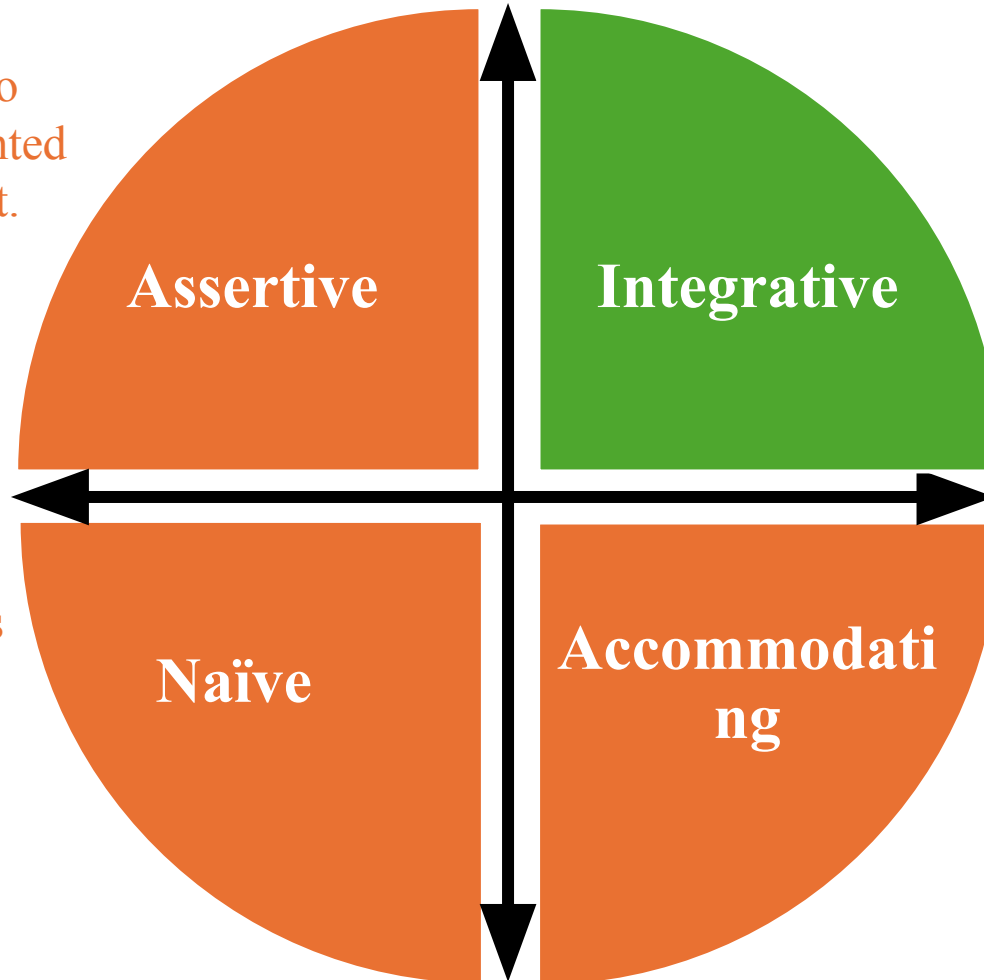
What could we design for this advocacy situation?

Developing interdisciplinary  
competencies

# Behaviours students bring to interdisciplinary group work – our starting point

Epistemic stability – contributes own knowledge to interdisciplinary effort

Unique knowledge. Superiority, unlikely to rethink. Over-represented in process and product.



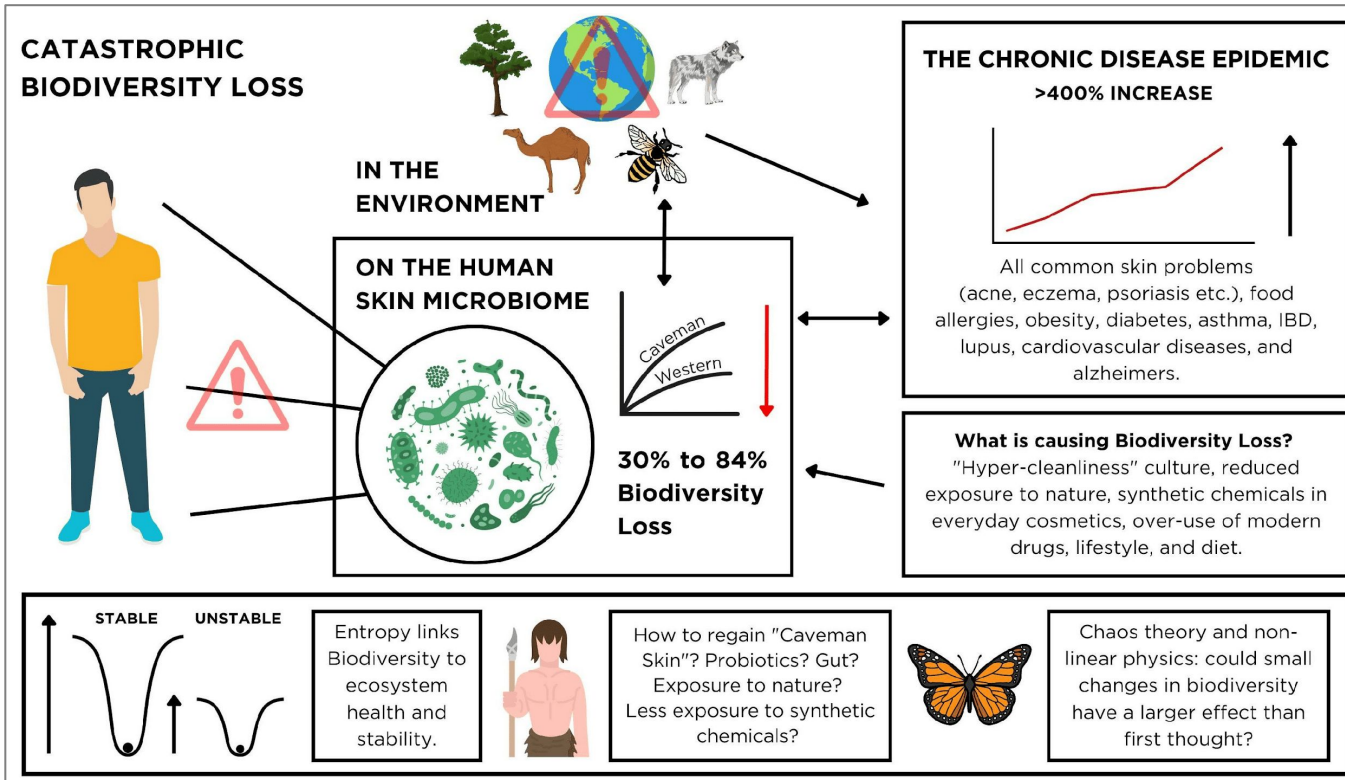
Welcomes uncertainty and discomfort. Bridges, seeks different perspectives, dialogue for shared understanding.

Epistemic adaptability – engages with others' knowledge

Underestimates challenges of interdisciplinary work. Contributions mostly common sense or process. Compromises.

Listens, asks. Feels insecure, inferior. Under-represented in process and product.

# A focal point for the encounters – graphical abstracts as boundary objects



Wallen-Russell et al, 2023

This visual abstract is an **artefact** that is **stable** while also accommodating **different worldviews**.

**Shared problem space with interpretive flexibility.**

**Attracts diverse perspectives.** Invites **reflection** on own discipline. Invites **coordination** in the absence of a consensus interpretation.

Capacity to **bridge** between different 'thought worlds':

# A scenario

A **cultural studies** scholar and a **physiologist** teach modules in their own discipline.

Both want to foster students' capacity to apply their disciplinary knowledge to phenomena that require interdisciplinary approaches.

With scaffolding, can a visual abstract help students to recognise:

- where they can contribute their academic learning (epistemic stability)?
- where they need others' perspectives to reach a better understanding of a nexus problem (epistemic adaptability)?
- How to put these into practice (integrative competency)?

# Scaffolding for communication between two modules

**Curriculum as usual** incorporating 3 x 20 min activities

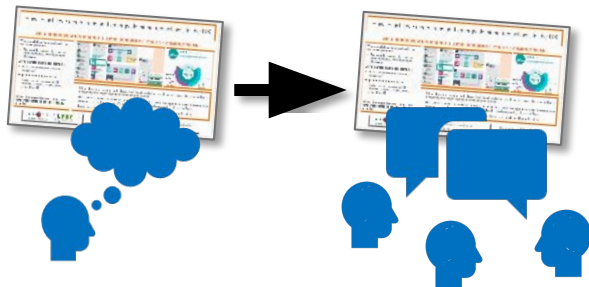
**EACH MODULE STARTS**

**EACH MODULE ENDS**

## Activity 1.

Separately introduce the encounter and visual abstract.

First individually then in disciplinary groups, students ask, “What can my discipline contribute?”



## Activity 2.

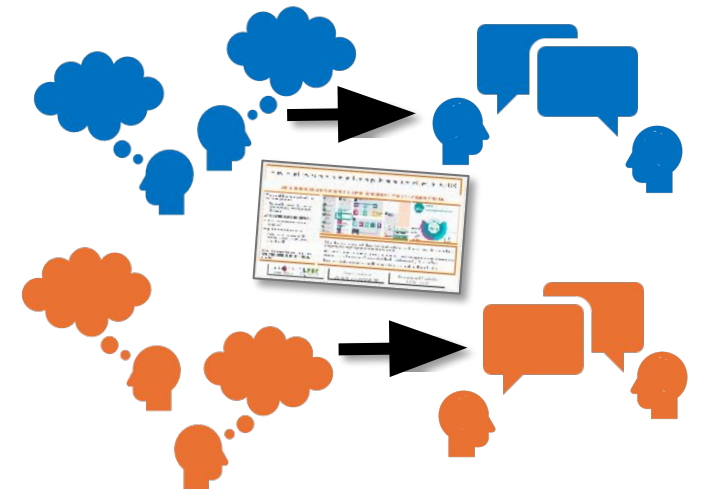
Disciplines formulate questions for each other.

Matched pairs self-organise to interview each other either asynchronously or live.



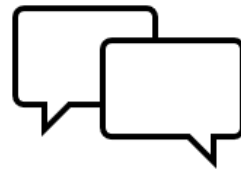
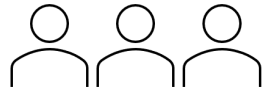
## Activity 3.

Students review and reflect on learning and how to communicate with other disciplines.

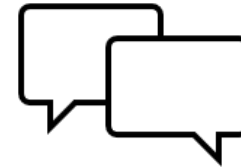


# Methodology

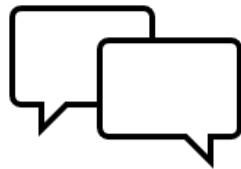
Convenience sample;  
interview and open-ended  
questionnaire data  
inductively analysed.



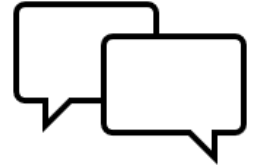
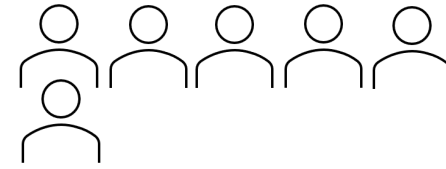
Interested external  
educationalists.  
Interviews (n=3).



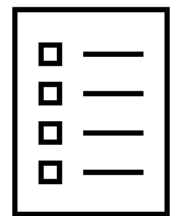
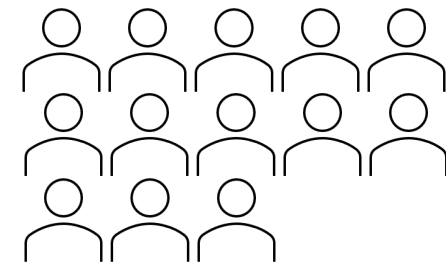
Module lead of final year  
undergrad social science  
module.  
Interview (n=1)



Module lead of elective  
postgrad modern  
language module.  
Interviews (n=1)



Pilot student workshop.  
Focus group, observation  
(n=6)



Elective postgrad modern  
language student pilot.  
Questionnaire (n=11)  
Observation (n=13).



# Perspectives from three interested educationalist interviewees

## Potential:

- Learning how one's discipline relates to "the bigger picture".
- Positive engagement with unfamiliar perspectives.

## Predicted benefits for students:

- Reflection - "digging into their tacit thoughts".
- Exposure broadens horizons.
- Interactions – "community".

## Challenges:

- Logistics - matching, coordination, student absences.
- Emergent, may defy fixed learning outcomes.
- "We don't know who our students are" - may struggle or be averse.

## Enablers

- The right time.
- Cognate disciplines at first, to build epistemic stability?
- "Intuitive" boundary object.
- "Non-judgemental"

# Module 1 - elective modern language for postgraduate students

Element	Adaptation
Students	~20 postgraduate students from across faculties; elective module.
Timing	Several weeks
Boundary object	6Rs framework; students' own photographs; slide deck of sustainability pledges.
Activities	<ol style="list-style-type: none"><li>1. In target language, discuss a key figure involved with one of the 6Rs.</li><li>2. Describe a sustainable spot on campus using key language elements.</li><li>3. Speed meeting to group with different disciplines; discuss sustainability pledges in English; output statement in target language.</li></ol>

Module lead:

- Students “quite proud” when they produced their statement.
- “They listen to each other and they learn from each other. That is the key thing for me”.
- Personal and academic relevance to their use of target language.

Student questionnaire:

- Suggestions for improving the activity disregarded interdisciplinarity.

# Module 2 - social science for BA and BSc students

Element	Adaptation
Students	6 BA and 2 BSc student taking a single module.
Timing	Compressed into 2 hours of final session of module.
Boundary object	Visual abstract (Wallen-Russell et al, 2023)
Activities	All activities from original pattern.

Module lead:

- “Touched and amazed” by the depth and energy of students’ engagement.
- Need to draw out metacognition about integrative competencies more in the final reflection.

Student poll:

- ‘This activity was useful for my learning’ - Strongly agree: 4.9 / 5.

# What did we learn?

## Potential:

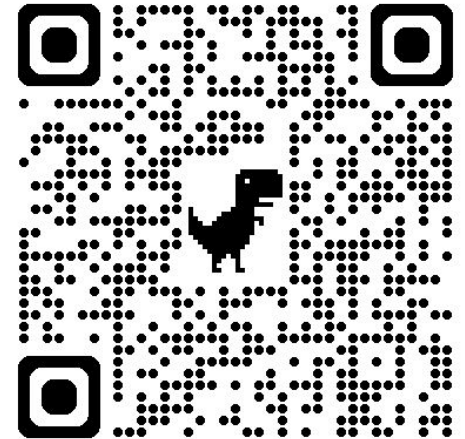
- Successfully adapted for already multidisciplinary cohorts.
- A well-chosen visual abstract can work well as a boundary object.
- Scaffolding is well-conceived.
- Can promote integrative competencies in multidisciplinary groups.
- Enjoyably challenging.
- Can be formative assessment.

## Considerations:

- Optimal stage? Students' disciplinary identity formation, appreciation of interdisciplinarity.
- Matching – who, and can this ever really be low-threshold?
- Boundary object needs to relate to learning outcomes – how sourced?
- Scaffolding - structure - is key to enabling participation. Framing? Reflective prompts?
- If a learning outcome hasn't already been designed for (e.g. sustainability) don't expect students to meet it.

# Next steps

- Prompts for metacognition in the introduction and reflection.
- Source visual abstracts with qualities that make good boundary objects.
- Connect module leads in a genuinely low-threshold way?
  - E.g. timetabling – who is teaching near me at the same time?
- Would you like to find out more?
  - Give a few details on this brief form and we will get in touch.



<https://forms.cloud.microsoft/e/x3ZJnKrsI>  
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# References

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