Learning for the Future
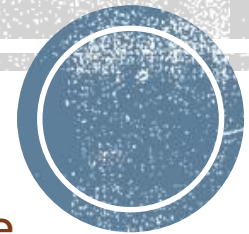
Learning Interdisciplinarity in Higher Education

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Outline

- Project Overview and Outcomes

- The Learning for the Future Toolkit website and model

- Discussion – Logistics of Creating Interdisciplinary Modules

- Phase 2 Practice (Translating Expertise Outward / Mutual Respect)

- Discussion – Integration and Assessment

Project Aim

1. *To develop a guide for staff for building explicit student competency and awareness of transferable interdisciplinary skills*

2. *To design, introduce, and evaluate a framework for learning interdisciplinarity across the Arts and Sciences*

❖ 3 experimental pairings
  ❖ Photography - Geography
  ❖ Environmental Science - Graphic Communication
  ❖ Theatre and Performance - Marine Biology

❖ Over 150 students
❖ 8 student mentors
❖ 10 module tutors

What is Interdisciplinarity?

1. Collaboration to integrate disparate areas of expert knowledge and skills towards a goal which could not be adequately reached with the knowledge and skills of an individual

2. The skill set required to do such collaboration (Morrison 2014).

- Students learning and practicing the specific set of skills for collaborating across disparate subject languages and backgrounds.

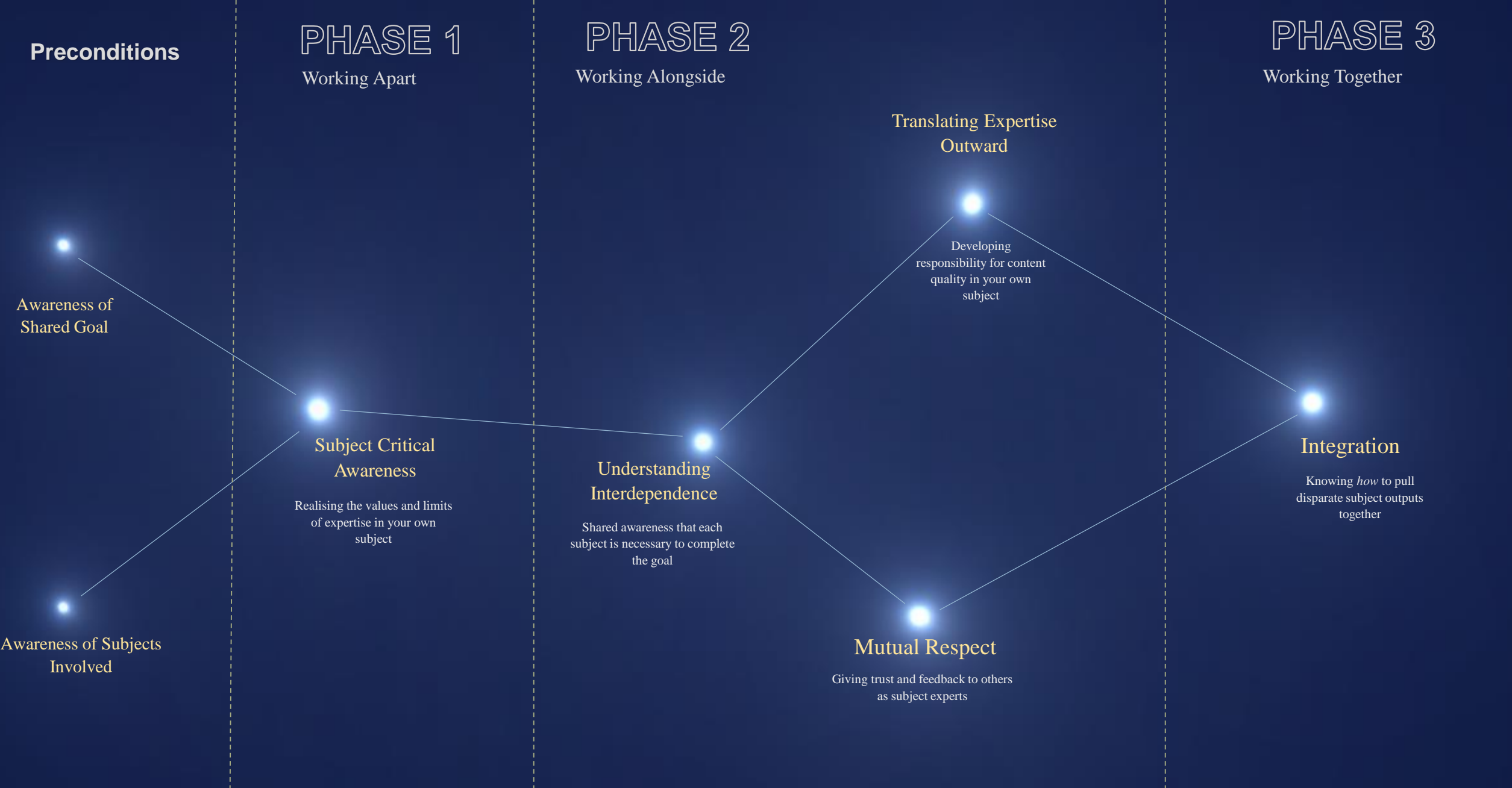- Better described as 'learning interdisciplinarity' than 'interdisciplinary learning'

Discussion:
Logistics of Interdisciplinary Modules

- New or Existing Modules

- Aims, Outcomes, and Alignment

- Creating a Shared Goal

- Faculty buy-in (Content and Qualifications)

- Subject Balance and Inclusivity

- Ensuring Student Satisfaction

Learning Interdisciplinarity Process

PHASE 1
Working Apart

PHASE 2
Working Alongside

PHASE 3
Working Together

Awareness of
Shared Goal

Awareness of Subjects
Involved

**Subject Critical
Awareness**

Realising the values and limits
of expertise in your own
subject

**Understanding
Interdependence**

Shared awareness that each
subject is necessary to complete
the goal

**Translating Expertise
Outward**

Developing
responsibility for content
quality in your own
subject

Mutual Respect

Giving trust and feedback to others
as subject experts

Integration

Knowing *how* to pull
disparate subject outputs
together

Practicing Phase 2: Translating Expertise Outward & Mutual Respect

- Think about an important, fairly advanced, feature of your subject that you found difficult to learn/grasp at first (or find challenging to teach).

- How would you explain it to the others in your group...in only 3 minutes?

  - Try to make the *meaning or importance* clear

  - Try to preserve as much expert and high level detail as you can

  - Try to avoid being misinterpreted or misremembered

Practicing Phase 2: Translating Expertise Outward & Mutual Respect

- Taking turns – explain your topic to your group in 3 minutes.

- When everyone is done, take turns recalling as much as you can of others' explanations
  - Give feedback on what you found clear and what you did not, or if anything seemed off topic

Discussion

Translating Expertise Outward

- How well did the others understand your explanation?

- What seemed to help understanding?

- What seemed not to?

- How might you help someone else trying to do this?

Mutual Respect

- What did you grasp of the meaning or importance of the feature to their subject?

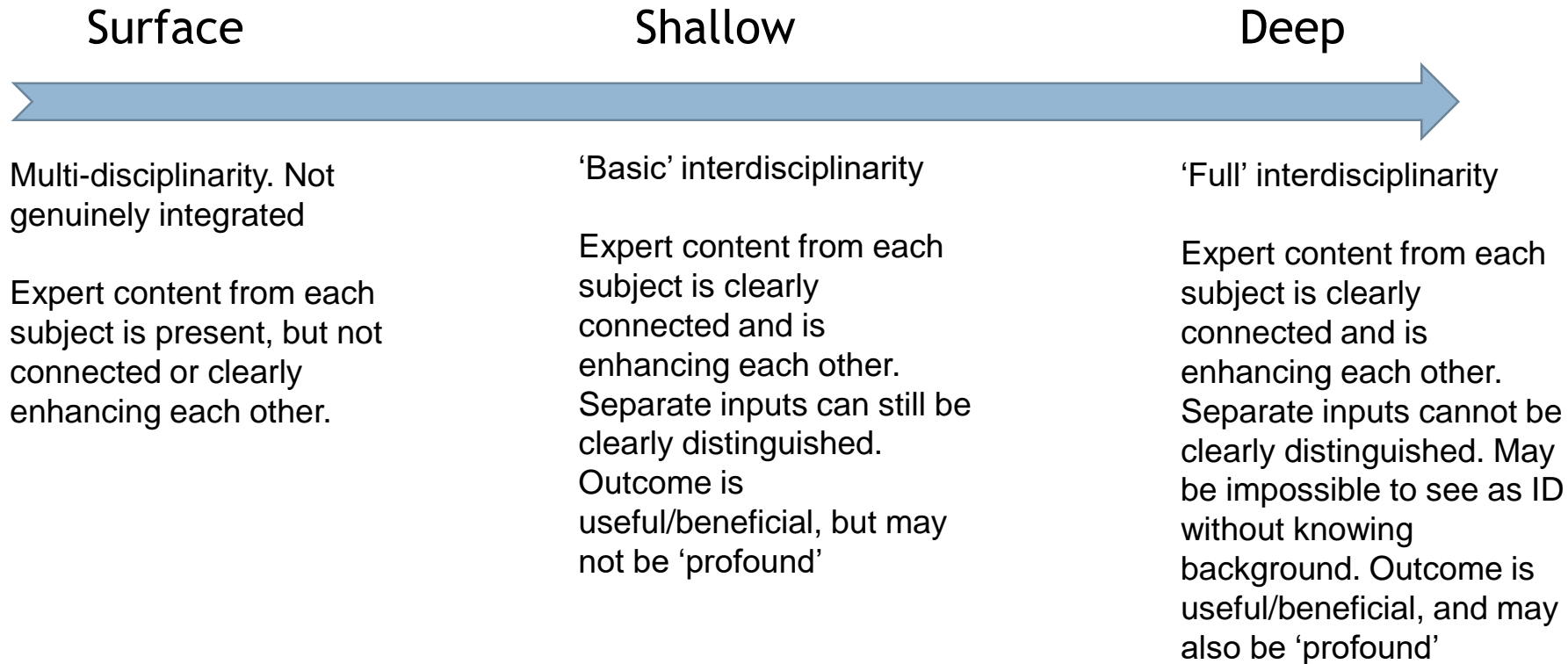- What kind of feedback were you able to give?

Integration

- Taking separate subject-based inputs and combining them into a new *cohesive* and *singular* output.

- The broad aim is to create an outcome that is novel and goes beyond the separate contributions. A 'good' integrated outcome should:
  - Be difficult/impossible to pull one subject's contribution out alone
  - Contain appropriate levels of *expert* content from each subject

- Being difficult to pull apart is what separates an interdisciplinary outcome from a multidisciplinary one.

- Containing *expert* content from each subject is what makes interdisciplinarity 'disciplinary'.

- Integration is also the source of the slightly inaccurate mantra that interdisciplinary outcomes are 'greater than the sum of the parts'. This is misleading though, because it masks the need for students to develop and apply real skill at integration, which is *itself* an additional part that is added.

Interdisciplinary Outcomes

Surface   Shallow   Deep

Multi-disciplinarity. Not genuinely integrated

Expert content from each subject is present, but not connected or clearly enhancing each other.

'Basic' interdisciplinarity

Expert content from each subject is clearly connected and is enhancing each other. Separate inputs can still be clearly distinguished. Outcome is useful/beneficial, but may not be 'profound'

'Full' interdisciplinarity

Expert content from each subject is clearly connected and is enhancing each other. Separate inputs cannot be clearly distinguished. May be impossible to see as ID without knowing background. Outcome is useful/beneficial, and may also be 'profound'

Integration is a continuum; there is no solid line between these categories.

Each outcome is a 'good' one unless it doesn't meet the aims it set out to.

Assessing Learning Interdisciplinarity

Learning for the Future Style:

- Learning interdisciplinarity is easiest and most effectively assessed throughout the module, as students engage with activities to demonstrate and develop each skill.

- Setting small individual assessments, targeted to the aims of each workshop/class.

- *Does this mean more work for staff?* Research has shown that spreading assessments out in small units across a module tends to actually *decrease* overall workload stress for students and markers alike. This comes from providing quicker, smaller, and more targeted units of feedback, specific to the skill/task at hand.

- Separately, or together as interdisciplinary groups.
  - In each of our case studies a majority of students said they preferred to be assessed together, specifically meaning at the same time. They said this made more sense to them in terms of being an interdisciplinary team, and made it feel more of a cohesive group effort.

- Students should ideally be assessed together, in terms of timing and what is being assessed, but this can be done differently in terms of *how* they are assessed in each subject.

- An interdisciplinary outcome cannot be reliably assessed on the *quality* of its content. By definition, the expertise necessary to say what a 'good' combination of any two subjects rests outside of the expertise of staff from either subject looks like (Morrison 2014).

References