Doctoral Education at the 'Eye' of the Perfect Storm

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& 6th NAIRTL Conference
TCD
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As Doctoral Educators, we face our ‘Perfect Storm’

- The storm signals are there:
  - questions about the disciplinary context in which doctoral education is delivered
  - the need for research-based responses to the grand challenges facing society
  - the employability beyond academia of the PhD graduate
To Catch The Wave (& Ride Out The Storm)…..

• The doctoral researcher needs
  – to explore and exploit the value latent in the thesis research
  – to recognize the corresponding need to interact with others
  – so that, together, they might progress from disciplinary expertise through multi-disciplinary interaction to interdisciplinary outcomes

• Doctoral education is challenged to develop within the researchers new and different skills and perspectives.

• Combined, the elements of this response define doctorateness as a new threshold concept
Our Objective Then Is...

... to explore how distinctive learning spaces can be built into doctoral teaching-learning environments (TLEs) in order to create opportunities for cross-disciplinary transformative learning to occur.
How Can We Create Doctoral Learning Spaces That. . .

Enable students to:-

– think beyond their own discipline
– communicate across traditional disciplinary divides
– in order to exploit the potential in their thesis research while not diluting the disciplinary core of the research.

Coughlan & Graham Cagney, 2012
Established Components of Doctorateness

<table>
<thead>
<tr>
<th>Contribution to Knowledge</th>
<th>Stated Gap in Knowledge</th>
<th>Explicit Research Question</th>
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*Figure 1: Components of Doctorateness, Trafford & Leshem (2009:5). Adapted by Graham Cagney & Coughlan, 2012*

- Demonstrating ‘doctorateness’ comes from integrating
  - high levels of competence in research
  - deep discipline knowledge
  - competence in presentation of the argument

Coughlan & Graham Cagney, 2012
What Common Understanding of Requirements do Students and Higher Education Share?

Society

Students

Trinity College Dublin (TCD)

Learning Domain

Educational Objectives

Student's Concept of Educational Objectives

Student's Concept of Educational Objectives

Student view of requirements

TCD view of requirements

Common understanding of requirements

Misunderstood requirements

Adapted from Graham, 2011

Coughlan & Graham Cagney, 2012
Congruence in the ‘Inner’ TLE Leads to Doctorateness

Coughlan & Graham Cagney, 2012

Adapted from Graham Cagney 2011
The PG Certificate in Innovation & Entrepreneurship

Core Modules: Innovation - from idea to value

Creative Thinking and Innovation (10 ECTS)
- Developing confidence in creative thinking
- Evolution of innovative ideas in multidisciplinary teams
- How to translate ideas into value creation

Opportunity Generation and Recognition (5 ECTS)
- Identifying what innovation means in the context of my PhD thesis research and my career aspirations
- Identifying critical components for capitalizing on my innovative potential
- Promoting my innovative ideas externally

Specialised Modules: Capitalizing on innovation (15 ECTS in total)

Coughlan & Graham Cagney, 2012
Innovation Academy TLE

Modules

Creative Thinking and Innovation → Opportunity Generation and Recognition → Planning Your New Venture → Protecting Your Idea → Creative Capital

Learning Outcomes

- Creative thinking
- Cross-disciplinary working
- Pitching research to funding bodies
- Handling differences and conflict
- Linking to practise
- Confidence in application
- Advice from industry experts

Teaching-Learning Strategies

- projects
- facilitation by staff
- reflection
- guest speakers
- video work
- brainstorming
- team work
- individual work

Coughlan & Graham Cagney, 2012
Conceptual map of the ‘inner’ Innovation Academy Teaching-Learning Environment

Innovation Academy teacher’s beliefs, conceptions of teaching, and reflective practice

Teaching & Assessing Content

Choice & Organisation of Content

Teaching Methods

Assessment & Feedback

PG Certificate Contexts

Aims & Learning Outcomes

Course Design & Organisation

Contact Hours & Workload

Choice provided for Students

DUAL Institutional & Disciplinary contexts

Staff-Student Relationships

Affective Quality of Relationships

Guidance & support for learning

Sense of Fairness & Moral Order

Student & Student Cultures

Abilities, Knowledge & Skills in Learning

Orientations, Beliefs, Norms & Values

Peer Groups, Morale, Identities

Influences from outside the Academy - demands & support

Learning Histories & Developmental Levels

Coughlan & Graham Cagney, 2012

Adapted from Entwhistle 2003
‘Thinking and Talking’ - Toward a Different Perception of Doctorateness

Thinking within a discipline
Talking within a discipline

Thinking across disciplines
Talking across disciplines

Thinking between disciplines
Talking between disciplines

adapted from Coughlan & Graham, 2009
Extending the Components of Doctorateness

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**WHEN SYNERGY EXISTS BETWEEN THE COMPONENTS THEN DOCTORATENESS IS DEMONSTRATED**

- Demonstrating ‘extended doctorateness’ comes from integrating:
  - high levels of competence in research
  - deep discipline knowledge
  - competence in *linkage, application*, presentation of the argument

Coughlan & Graham Cagney, 2012
LIMITATIONS

Until you spread your wings,
you’ll have no idea how far you can walk.