

Preparing students for an unknown future: pedagogies of uncertainty and troublesome knowledge



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Purpose

- 1) Identify a set of 21st century **capabilities**, dispositions and attributes for employability in a business environment characterised by speed, complexity, uncertainty and risk.
- 2) Offer examples of curriculum **interventions** by which such skills and attributes can be embedded into our present curriculum and assessment designs and hence better developed in students
- 3) Consider modes of **assessing** and gaining evidence of attainment of such 21st century capabilities.
- 4) Provide an opportunity for participants to share **successful practices** from their own business education contexts.



The dogmas of the quiet past, are inadequate to the stormy present. The occasion is piled high with difficulty, and we must rise with the occasion.

As our case is new, so we must think anew and act anew. We must disenthrall ourselves ...

Abraham Lincoln,

Venturing into strange places

The student is perforce required to venture into new places, strange places, anxiety-provoking places . This is part of the point of higher education. If there was no anxiety, it is difficult to believe that we could be in the presence of a higher education.

(Barnett 2007: 147)



Pedagogies of uncertainty

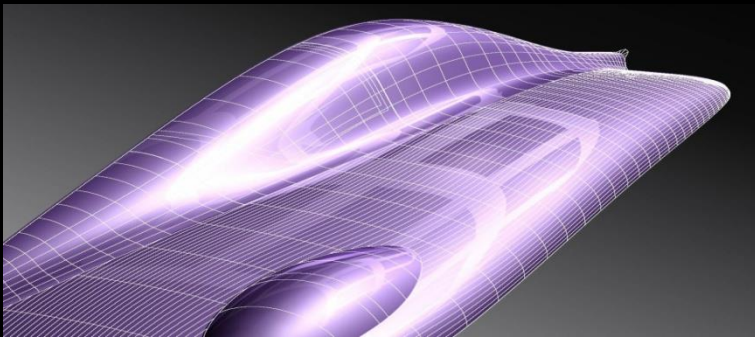
I would say that without a certain amount of anxiety and risk, there's a limit to how much learning occurs. One must have something at stake.

No emotional investment, no intellectual or formational yield.

(Shulman *Pedagogies of Uncertainty*, 2005:1)



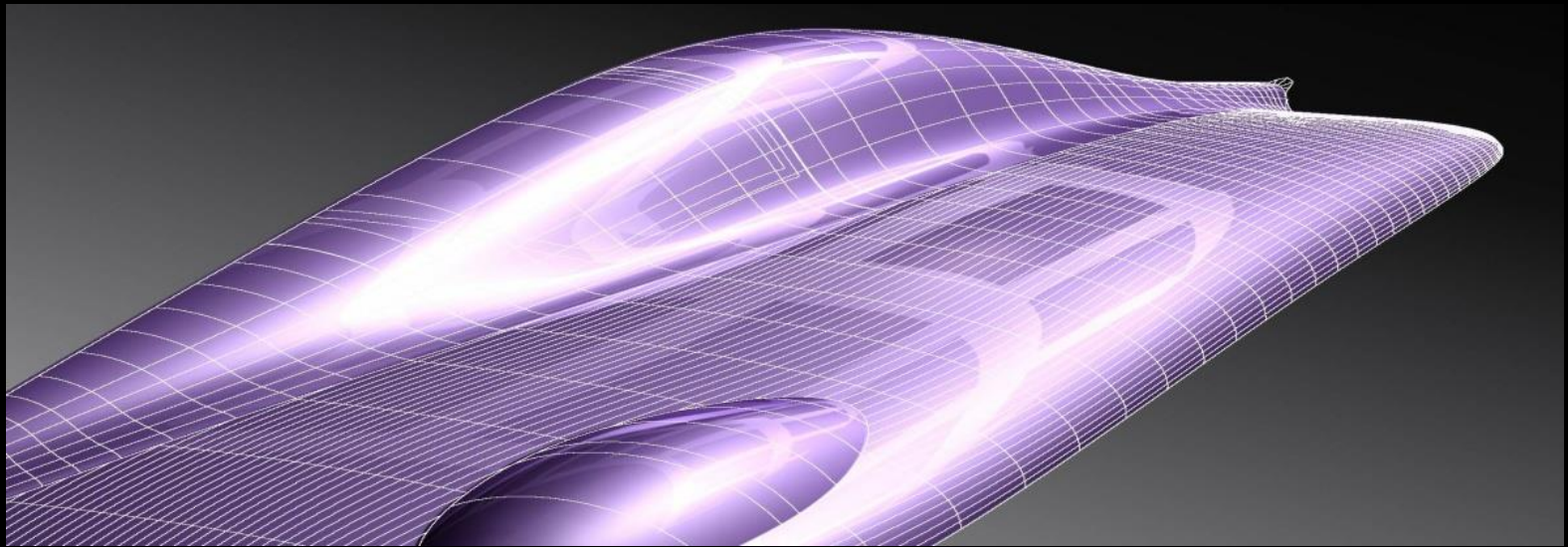
- Speed and acceleration
- Uncertainty
- Complexity
- Multiculturalism
- Mobility of the population
- Conflict (social, military)
- Inter-generational tension
- Need for ethical citizenship
- Information saturation
- Proliferation of knowledge
- Globalisation
- Internationalisation
- Private /public sector tension
- Increasing panic

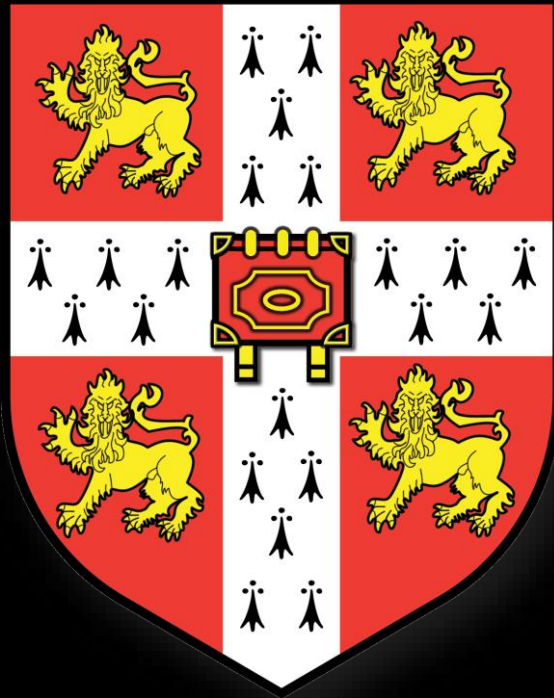


Characteristics of the 21st century

- Unpredictability
- Risk
- Need for flexibility and agility
- Entitlement v responsibility
- Scarcity of resources
- Austerity
- Sustainability
- Need for prudence
- Transparency & accountability
- Discontinuity and rupture
- Shifting paradigms
- Poverty v affluence
- Outsourcing of jobs
- Youthfulness

Speed & the Unsettling of Knowledge









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Provost of Harvard University



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510,040 **COMMENTS**



process	artefact
fragmentation	cohesion
exploration	exposition
visual	textual
volatility	stability
fast time	slow time
consensus	authority
openness	containment



text
stability
individual
private



A futuristic digital environment with a person interacting with multiple floating screens and data visualizations. The scene is dominated by blue and white tones, with various data charts, graphs, and text windows floating in a 3D space. A person in silhouette stands in the center, gesturing towards the screens. The background is filled with complex data patterns and glowing elements, creating a sense of a vast, interconnected digital world.

image

mutability

collective

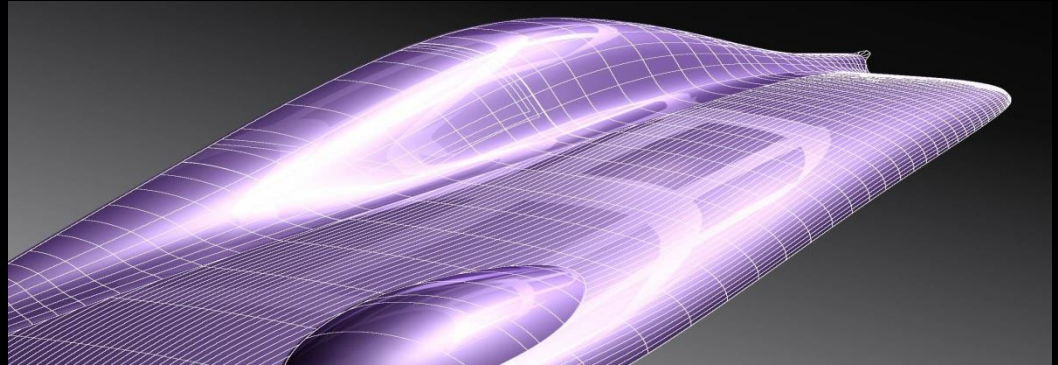
public

Textualities, temporalities, power



fast and slow time (Eriksen 2001)

'..smaller, faster,
cheaper .. NASA'



Virilio 2000, Eriksen 2001, Honoré 2004

supercomplexity
death of geography
issues of democratic space
advent of universal real time
tyranny of the moment
slow and fast time
'presentified' history
single gaze of the cyclops
the universal accident

Eriksen laments the disappearance of 'slow' principles of order, deliberation, reflection, completeness, coherence, narrative.

Does the erosion of such principles constitute a crisis in institutional identity for the university?

public/private continuum

- displacement of slow time to the private sphere
- home life compromised by 24/7 digital
- Sharma (2014) speaks of 'temporal recalibration'

Learning comes to be depicted within the organisation as an undertaking that seems non-problematic, without any significant incurring of risk. It does not entail deep personal change or transformation, troublesome challenge or even, at times, engagement.

As if 'epistemic access ... can be dispensed with' (Young 2012)



Tensions and contradictions arise for the university when it is simultaneously required to produce for society satisfied consumers and graduates that can act in complex, uncertain, risk-laden and unpredictable environments.

The latter entails radically different forms of curriculum, student-staff relationships and student encounters.



co-enquiry, transformation

In this mode the learner is not in a position to identify and state their learning needs, which are emergent and contingent, and require an altered relation of trust with their teachers and fellow learners.

Students, as organisational actors, are rendered differently, are *transformed*, as co-enquirers, co-creators, co-producers (Neary and Amsler 2013).

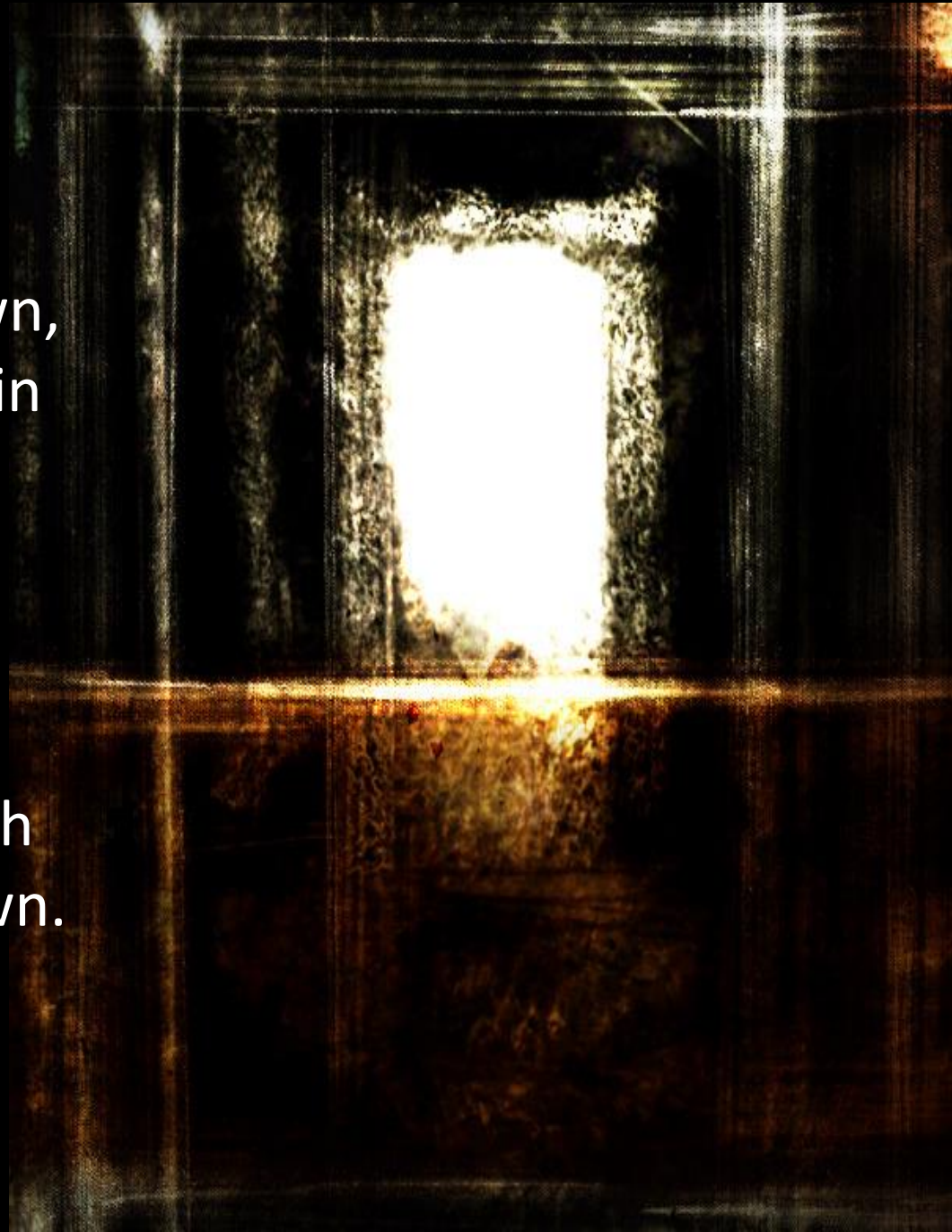
The need to embrace 'troublesome knowledge'; students as co-inquirers



Real learning requires
stepping into the unknown,
which initiates a rupture in
knowing...

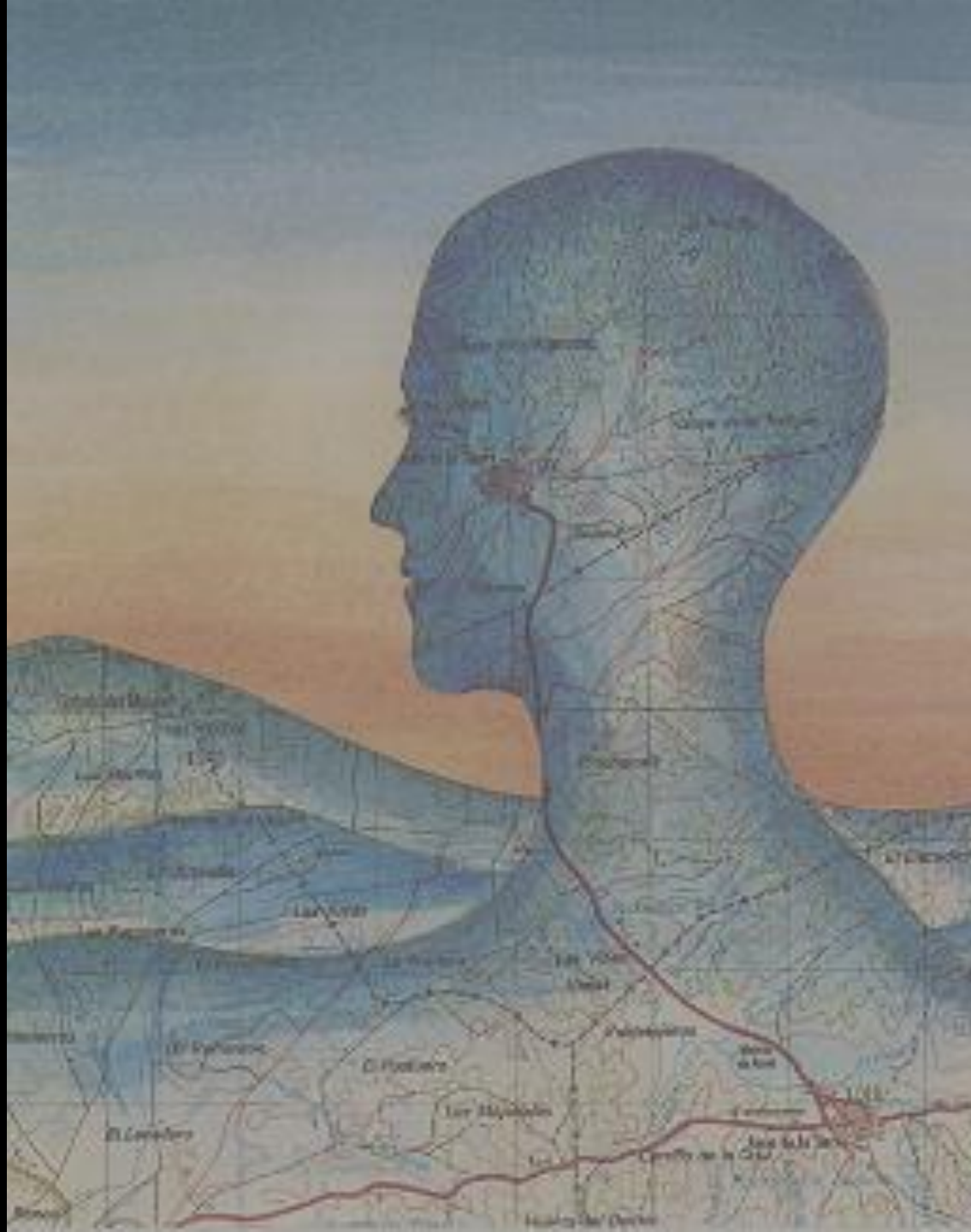
By definition, all TC
scholarship is concerned
(directly or indirectly) with
encountering the unknown.

Schwartzman 2010 p.38



Research could be a strong condition that is aimed at bringing about supercomplexity in the minds of students.

(Barnett 1992 p.623)



- critical understanding
- disciplinary currency
- provisionality (knowledge, situations)
- contingency (knowledge, situations)
- problem formulation
- problem analysis and resolution
- evaluation
- evidence-based solutions
- argumentation
- deriving meaning from complexity
- modes of enquiry
- informed judgement
- advanced techniques
- independence
- learner responsibility
- creativity
- critical values
 - ethical
 - social
 - cultural
 - environmental
- wider professional conduct
 - contextual 'savviness'
 - political astuteness

CIHE international / intercultural attributes



Knowledge

- world geography, conditions, issues and events
- complexity and interdependence of world events & issues
- understanding of historical forces that have shaped the current world system
- knowledge of a foreign language, intercultural communication concepts, international business etiquette



Attitudes

- openness to learning & positive orientation to new opportunities, ideas and ways of thinking.
- tolerance for ambiguity and unfamiliarity.
- sensitivity & respect for cultural differences.
- empathy or the ability to take multiple perspectives.
- self-awareness and self esteem about one's own identity & culture.



Skills

- research skills to learn about the world
- critical and comparative thinking skills
- ability to think creatively and integrate knowledge
- ability to use another language effectively and interact with people from other cultures
- coping and resiliency skills in unfamiliar and challenging situations

What is distinctive about 'higher' learning?

“It is furthermore a peculiarity of the universities that they treat higher learning always in terms of ***not yet completely solved problems, remaining at all times in a research mode ...***

Schools, in contrast, treat only closed and settled bodies of knowledge. The relationship between teacher and learner is therefore completely different in higher learning from what it is in schools. ..”



Wilhelm von Humboldt 1810

What is distinctive about 'higher' learning?

“...At the higher level, the teacher is not there for the sake of the student, both have their justification in the service of scholarship.”

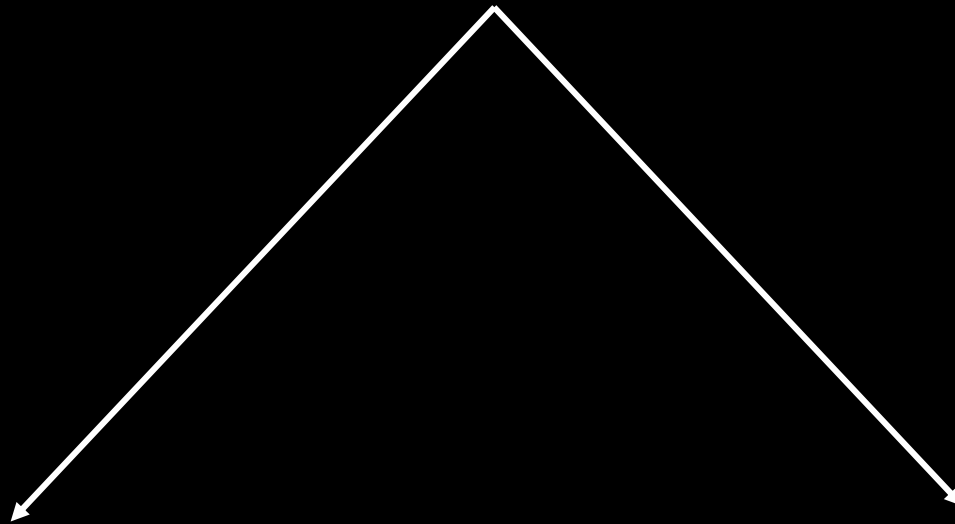


Wilhelm von Humboldt 1810

Idealistic (Humboldtian) approach. (Simons & Elen 2007)

- Research a kind of general education.
- Academic enquiry, morality (edification) and citizenship are linked.
- University different from schools (social needs) as well as from research institutions (govt needs, commercial interests)
- Education at the university solely guided by academic enquiry (one submits to the tribunal of reason, the spirit of truth, the force of the better argument.)
- Not influenced by pedagogic expertise or didactics, or managerial or moral or economic imperatives.
- State and society cannot ask for immediate returns.

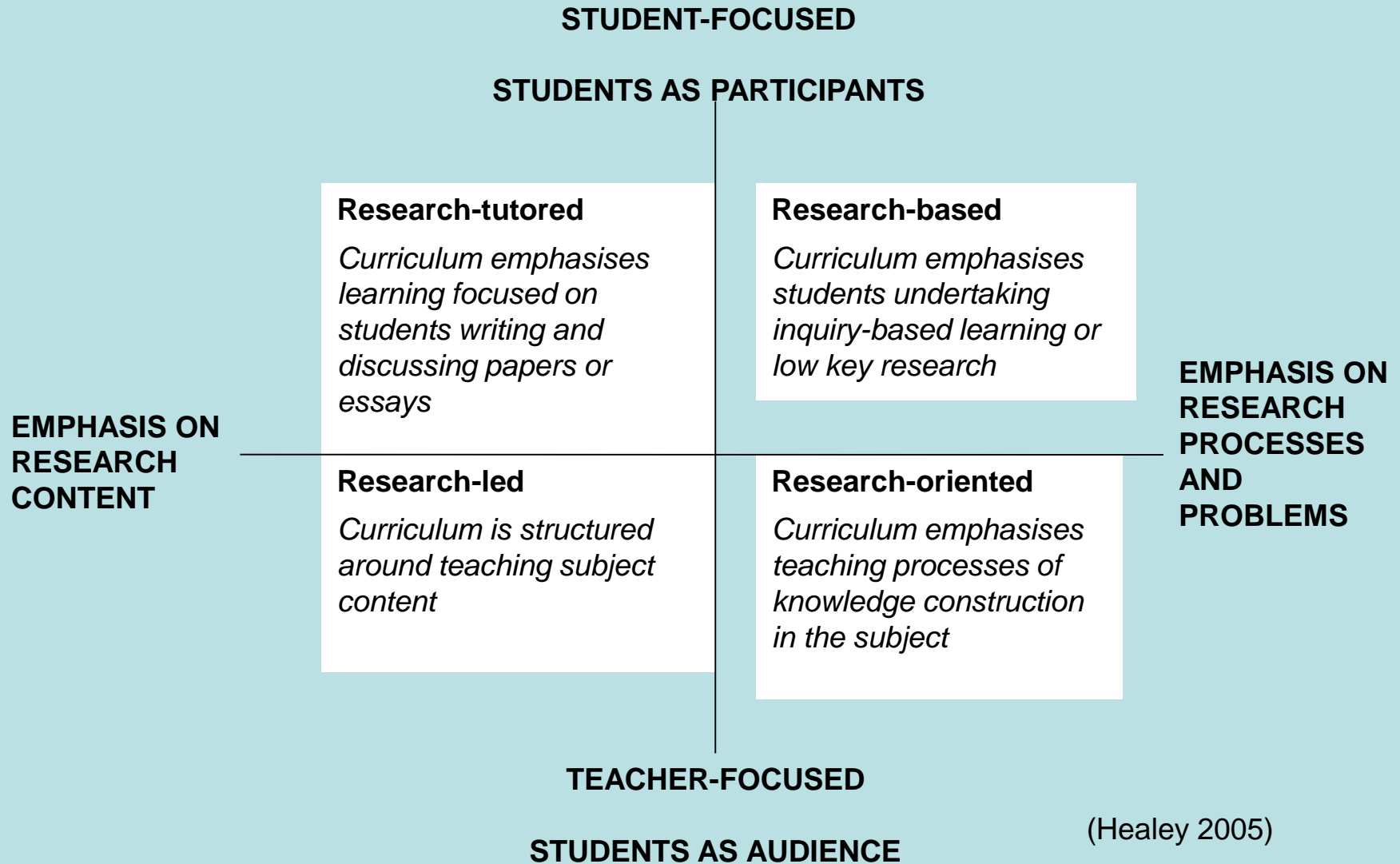
successful graduate



responsible citizen

effective employee

Curriculum design and the research-teaching nexus



(Healey 2005)

Curriculum design and the research-teaching nexus

STUDENT-FOCUSED

STUDENTS AS PARTICIPANTS

Research-based

Curriculum emphasises students undertaking inquiry-based learning or low key research

EMPHASIS ON RESEARCH PROCESSES AND PROBLEMS

EMPHASIS ON RESEARCH CONTENT

Research-oriented

Curriculum emphasises teaching processes of knowledge construction in the subject

TEACHER-FOCUSED

STUDENTS AS AUDIENCE

(Healey 2005)

Curriculum design and the research-teaching nexus

STUDENT-FOCUSED

STUDENTS AS PARTICIPANTS

Research-based

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**EMPHASIS ON
RESEARCH
CONTENT**

**EMPHASIS ON
RESEARCH
PROCESSES
AND
PROBLEMS**

TEACHER-FOCUSED

STUDENTS AS AUDIENCE

(Healey 2005)

High Impact Activities



- ★ **First-Year Seminars and Experiences**
- ★ **Common Intellectual Experiences**
- ★ **Learning Communities**
- ★ **Writing-Intensive Courses**
- ★ **Collaborative Assignments and Projects**
- ★ **“Science as Science Is Done”;
Undergraduate Research**
- ★ **Diversity/Global Learning**
- ★ **Service Learning, Community-Based Learning**
- ★ **Internships**
- ★ **Capstone Courses and Projects**

Some examples

- Materials Science
- English Literature
- Mechanical Engineering
- Forensic Science

Other 'modes of exposure'

- CROP (Chicago), URO (MIT)
- Reinvention Centres (Stonybrook NY, Warwick)
- Journal of Undergraduate Research (Warwick)
- Undergraduate Internship Programme – (Strathclyde)
- Community Engagement – Jazz in West Philly (Upenn)





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FEATURE: STEPHANI BABCOCK

Modern dance is a medium of artistic expression so varied and dynamic that to make any assertion about the genre as a whole is a difficult, if not impossible, task. In the way that it



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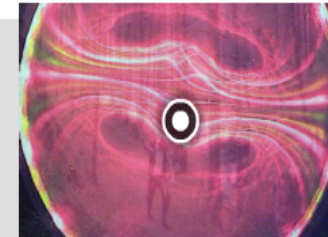
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4 Informed evaluative judgement: students as peer reviewers

Focus groups

- What do you think is best for learning – giving or receiving feedback?

I think when you are reviewing...[the work of peers]...it's more a self-learning process, you're teaching yourself; well, I can see somebody's done that and that's a strength, and I should maybe try and incorporate that somehow into my work. Whereas getting...[teacher]... feedback you're kind of getting told what to do; you're getting told this is the way you should be doing it, and this is the right way to do it. You're not really thinking for yourself.... I think...[reviewing]... would help you not need so much of teacher feedback, if there was more of this. Whereas, I think if you're not being able to do...[reviewing]... then you will always be needing more...[teacher feedback]...

Focus groups

- What do you think is best for learning – giving or receiving feedback?

*‘For me it would probably be **to give feedback** because I think seeing what other people have done is more helpful than getting other people’s comments on what you have already done. By looking at other people’s work **you can see for yourself** what you have forgotten or not even thought about. When people give feedback on yours they generally just talk about what is there. They don’t say, well I did this on mine and you could put that in yours.’*

Pedagogy must be founded
on openness, mutual
disclosure, personal risk and
disturbance' (p.258).

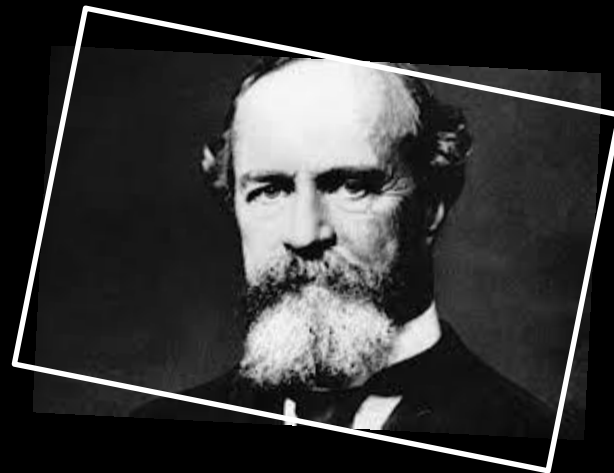
(Barnett 2004: 247-260)



Not a recipe book

- 'I say moreover that you make a great, a very great mistake, if you think that psychology, being the science of the mind's laws, is something from which you can deduce definite programmes and schemes and methods of instruction for immediate schoolroom use. Psychology is a science, and teaching is an art; and sciences never generate arts directly out of themselves. An intermediary inventive mind must make the application, by using its originality.'

William James (1906)



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