

# A Connected Curriculum for Higher Education

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1. Philosophical roots

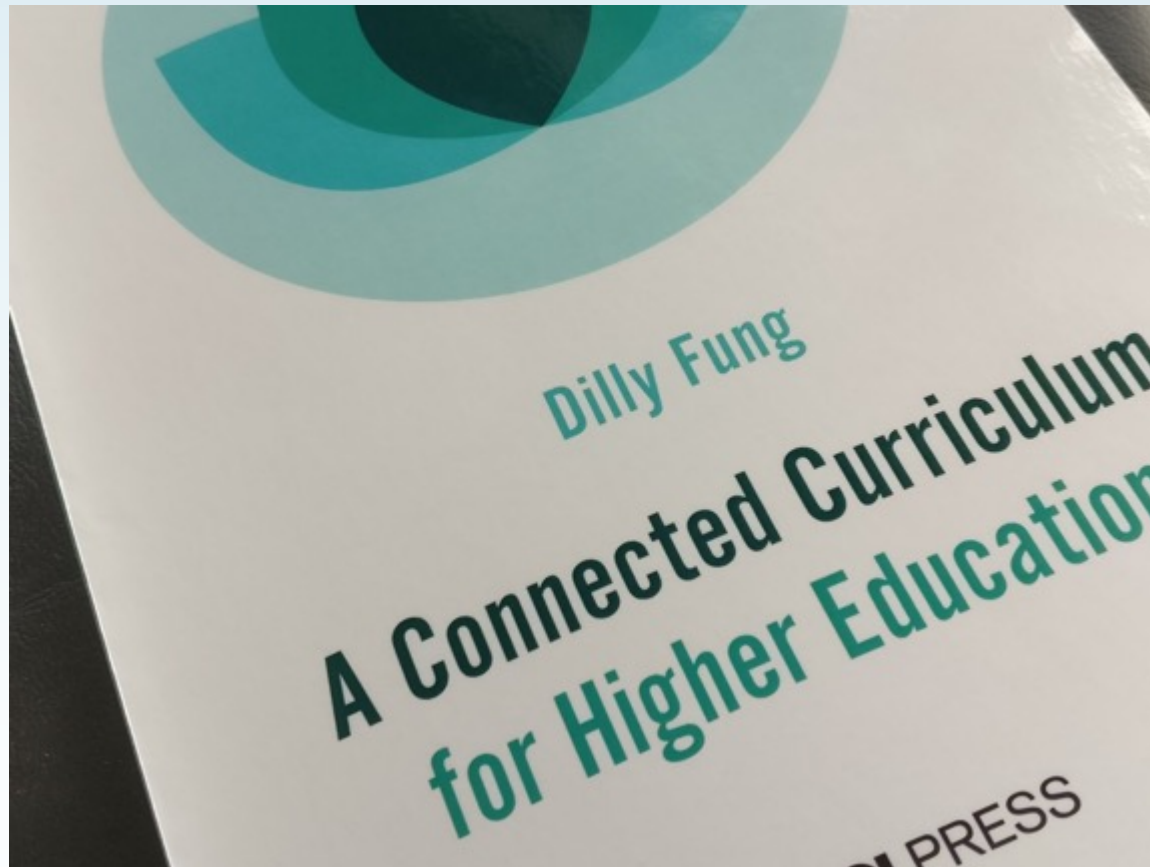
2. Research-based education

3. The Connected Curriculum framework

4. International responses

5. Discussion





## **A Connected Curriculum for Higher Education**

Seminar based on new monograph,  
free to download from [UCL Press](#)

# A philosophical framing

Drawing on philosophical hermeneutics, education may be defined as:

- ‘self-formation’ and collective advancement through critical dialogue
- the widening and merging of horizons

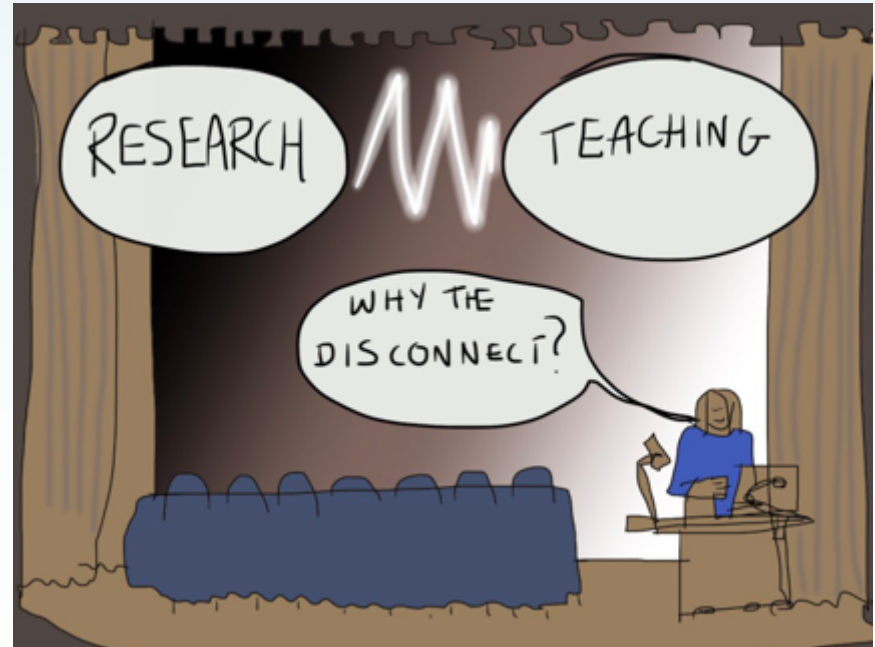
(Gadamer 2004)



# A stance that precedes methodology

In this framing, education is underpinned by the need for the human mind to remain 'unsatisfied with what it imagines it knows' (Fairfield 2010, 3).

This, I argue, is also the central tenet of research.



# A position that crosses disciplines

In higher education, the detailed practice of coming to know varies within and across disciplines. This applies both to student learning and to research.

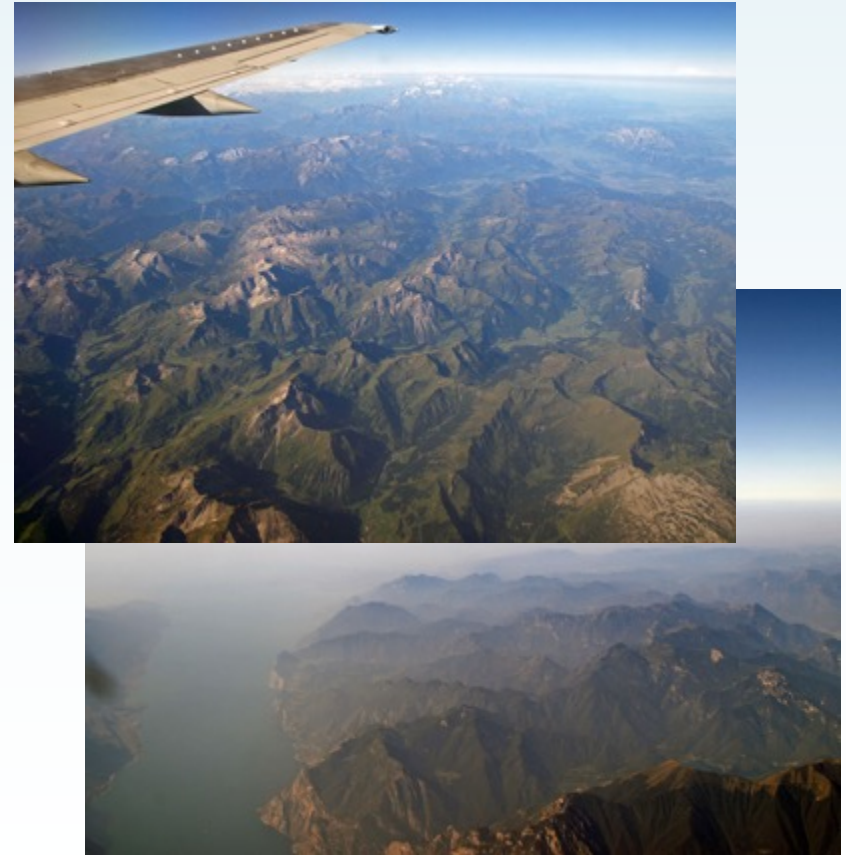
The stance of testing what we think we know and advancing knowledge, understanding, policy and practice through open-minded critical dialogue underpins all of these spaces.



# A stance that is also values-based

Education is  
'for the global common  
good', embodying a  
'shared responsibility  
for a sustainable future'

(UNESCO 2015, 9)



# Towards the global common good

Higher education contributes to:

- broadly distributed opportunity
- equality of respect and material circumstance
- factors that cohere communities, including intercultural capability and tolerance within a common framework of human rights and mutual support

(Marginson 2016)





## There have been disconnections between:

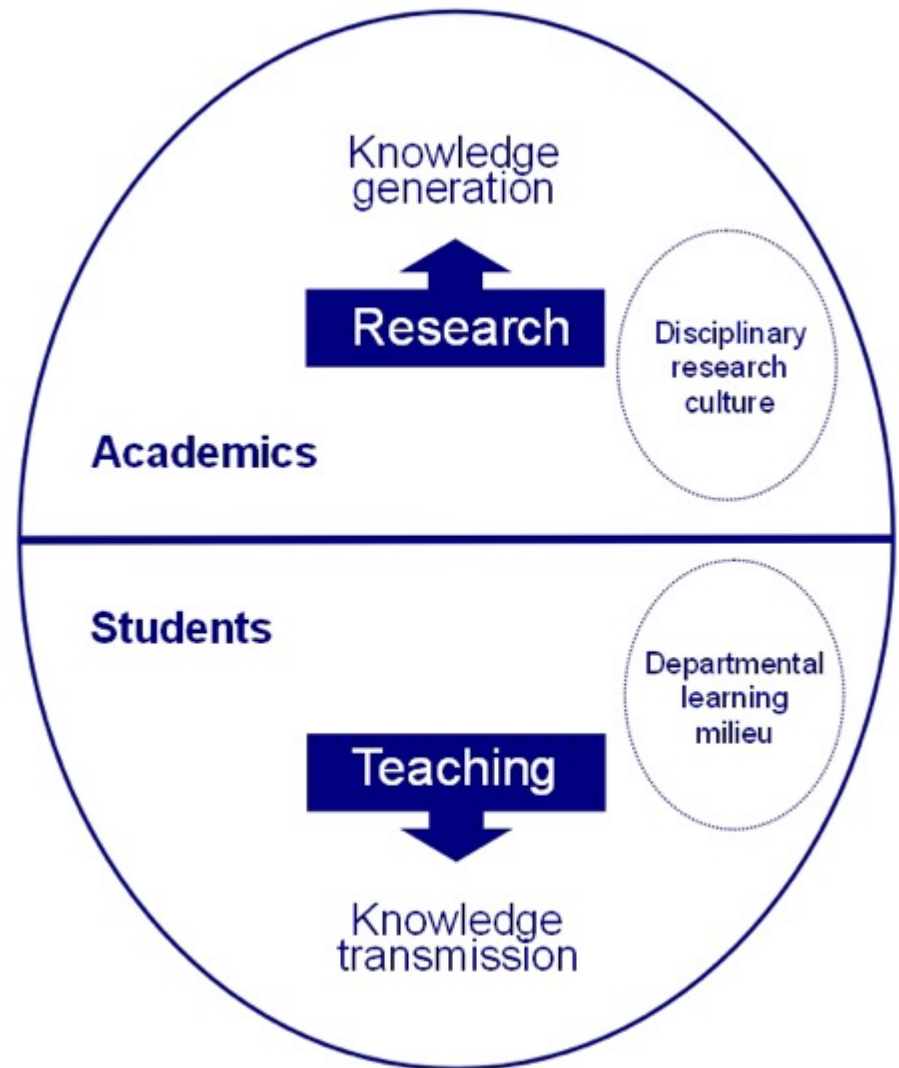
- Universities and 'real world' communities
- Different missions, activities and roles within institutions
- Disciplinary and methodological orientations
- Research and student education



This traditional model of the relationship between teaching and research needs to be replaced with a more inclusive notion of **scholarly knowledge-building communities**

(Brew 2006, 18)

Conception of Knowledge: objective & separate from knowers



Conception of Teaching: teacher focused, information

# Research-based education

Increasing evidence through empirical studies that students learn more effectively through active, enquiry-based learning as long as it is structured with peer collaboration and dialogic feedback.

See, for example, Blessinger and Carfora eds. 2014; Wood 2010; Spronken-Smith and Walker 2010; Levy and Petrulis 2012.



## Comparing traditional teaching with enquiry-based learning (Wieman and Gilbert 2015)

Comparative experiment: students who had to engage in interactive, research-based methods and received feedback from fellow students and their instructor were later tested in a quiz designed to 'probe the mastery of the learning objectives' (155).

Students engaging in active enquiry outperformed the other, traditionally taught student cohort significantly, across the entire distribution.



## Excellent education in research-rich universities

(Fung, Besters-Dilger and van der Vaart, 2017)

‘[B]eing part of a research-rich culture benefits students by providing them with a range of approaches to knowledge and knowledge production. These relate to the learning that occurs when undertaking the specific academic, cultural and professional practices of particular disciplines and/or of thematic interdisciplinary investigations.

Benefits for students also arise from the intellectual depth associated with engaging in any cutting edge investigations, and from the range of skills associated with independent and collaborative enquiry.’ (5)



# Legitimate disciplinary variations

Research is  
'advancing the  
frontiers of  
knowledge' ...  
(Nurse 2015,11)



But there's no single definition of legitimate research practices in the phrase 'research-based education': there are disciplinary variations in both practices and principles associated with research and enquiry in different disciplines.

Exploring (rather than ignoring) these variations can be a great catalyst for rich learning within *and across* disciplinary contexts.

# The Connected Curriculum at University College London



Connected  
Curriculum



## Institutional commitment

At University College London, our top strategic priority for the next 20 years is to close the divide between teaching and research. We want to integrate research into every stage of an undergraduate degree, moving from research-led to research-based teaching.”

Michael Arthur, President and Provost,  
UCL, 30 April 2014

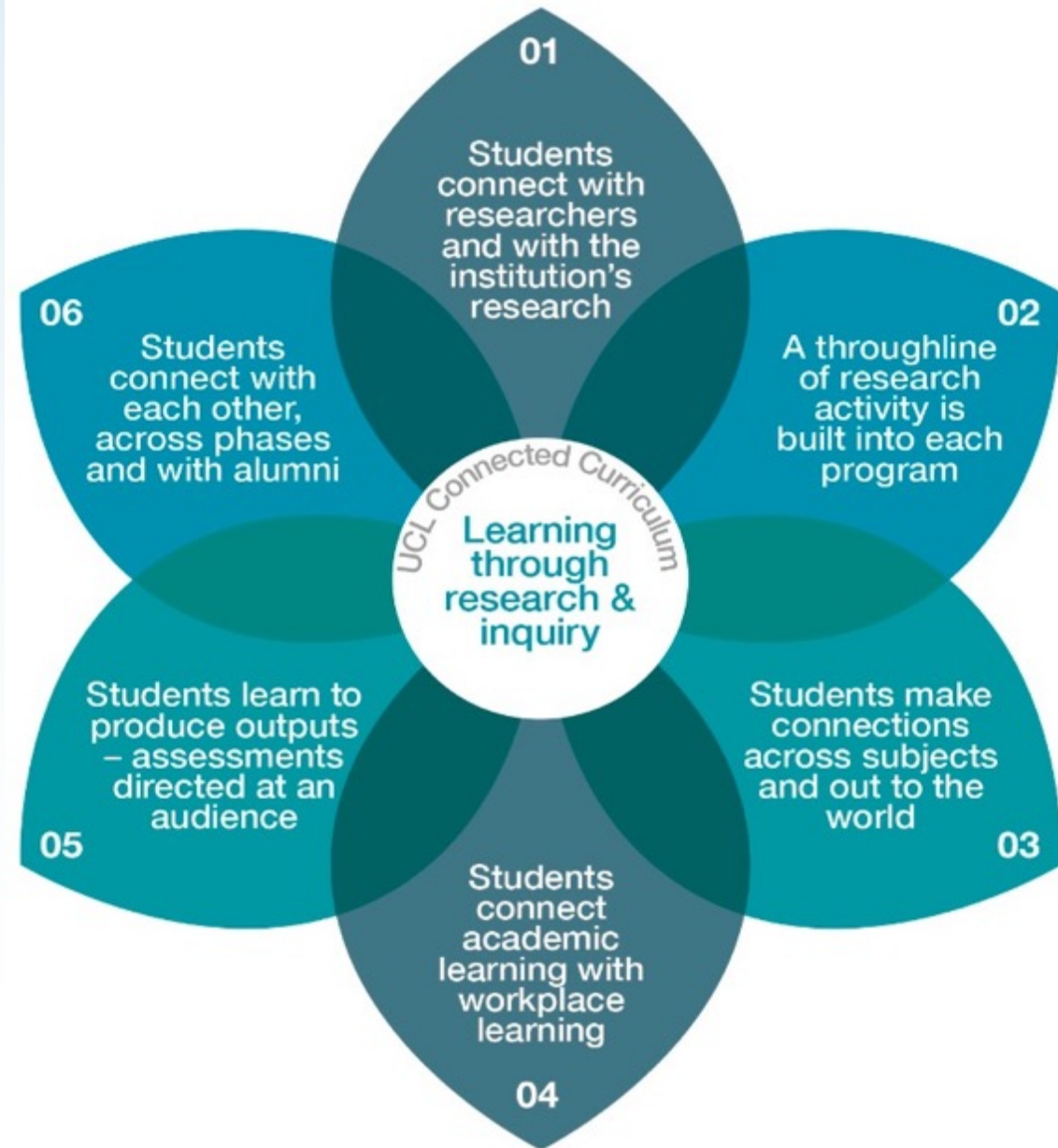
*UCL 2034* strategy includes key commitment to the ‘integration of research and education, underpinning an inspirational student experience’ (UCL 2017).



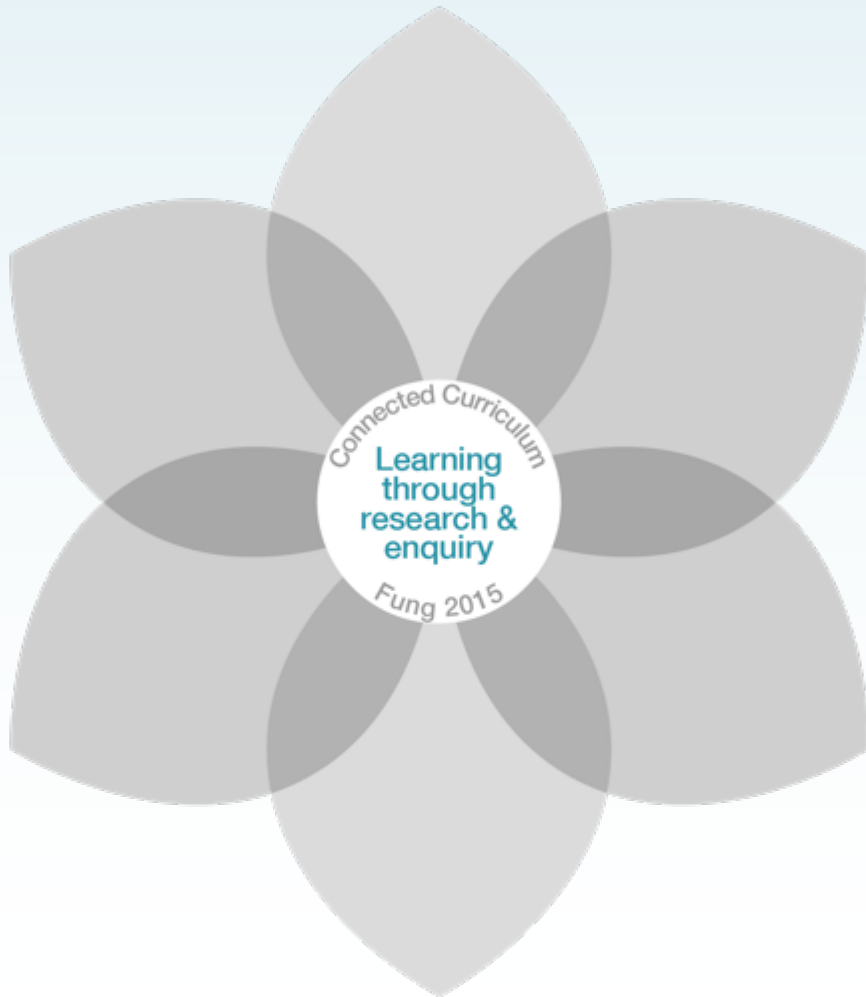


# The Connected Curriculum Framework

See Fung, D. (2017, 5)  
*A Connected Curriculum for Higher Education*  
 UCL Press: London

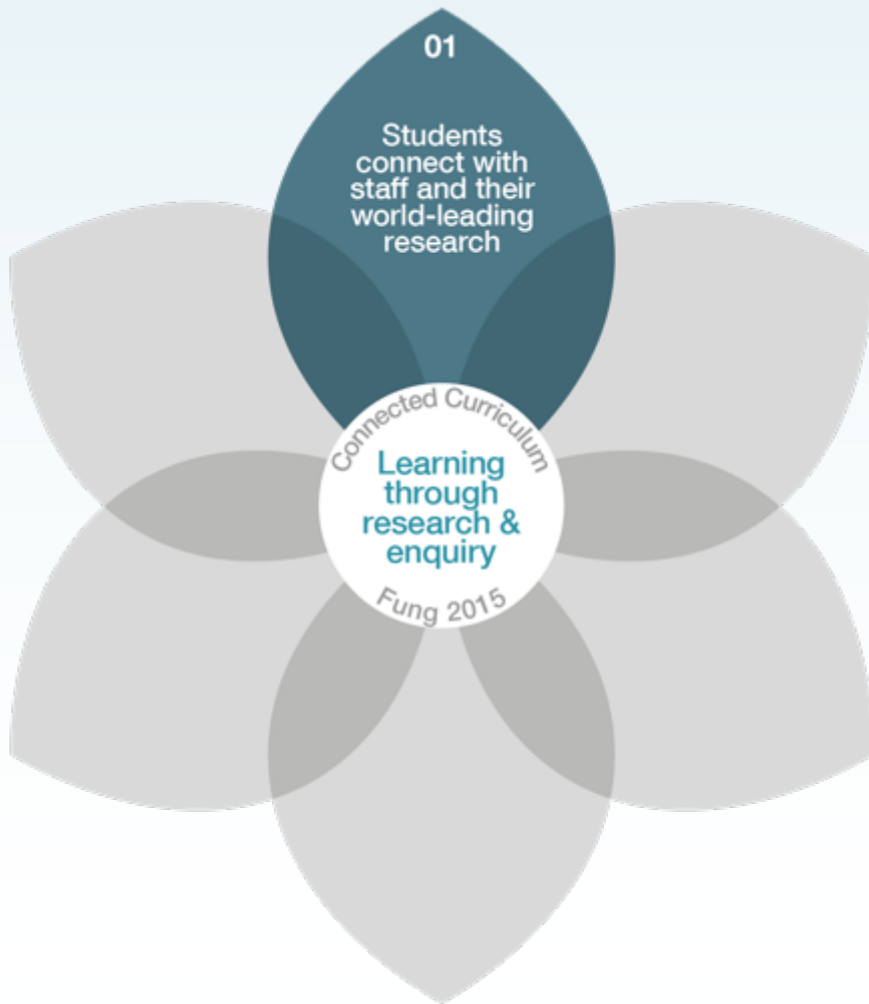


## The core principle: learning through research and enquiry



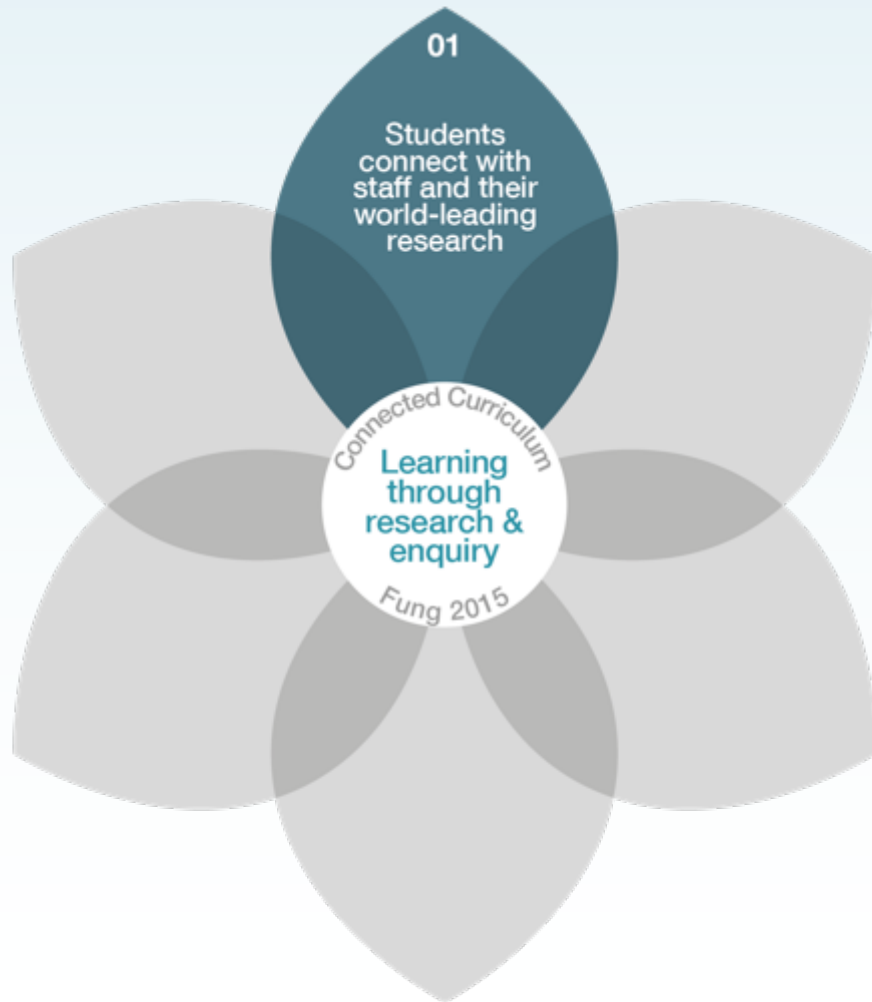
- What *is* research in our subject(s)? What principles, practices and values underpin *our* research?
- In what ways, and when, are our students already engaging in forms of enquiry and/or their own investigative research?
- Do our approaches to student assessment promote authentic enquiry?

# Connecting with research and researchers



- Are students introduced to and inspired by the latest research in the field, including that undertaken by the department?
- Do their courses and the wider activities and events in their department enable them to meet, learn from and even challenge researchers and scholars?

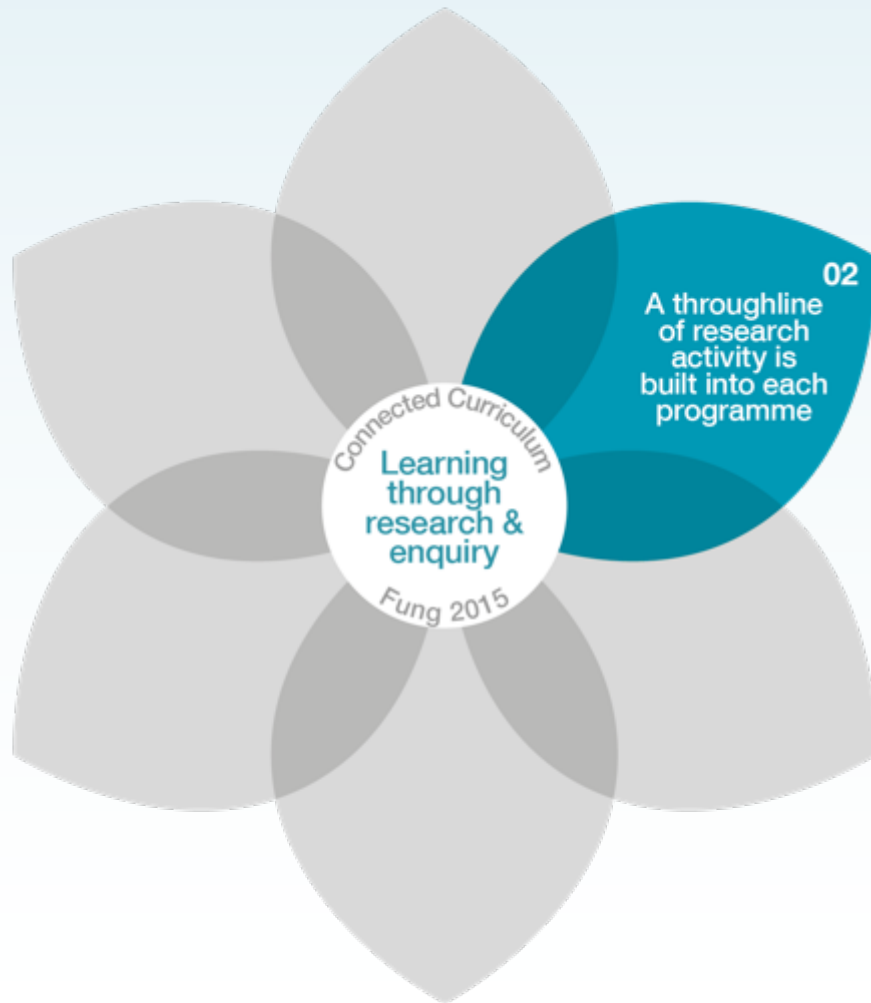
# Connecting with researchers: one example



During induction week 145 first-year UG students in Brain Sciences view a selection of videos with academics discussing their research, identify someone to interview, & present findings in seminar group.

**Meet Your Researcher**  
template available at  
[https://www.ucl.ac.uk/teaching-learning/connected-curriculum/Meet\\_your\\_researcher](https://www.ucl.ac.uk/teaching-learning/connected-curriculum/Meet_your_researcher)

# A 'throughline' as part of programme design



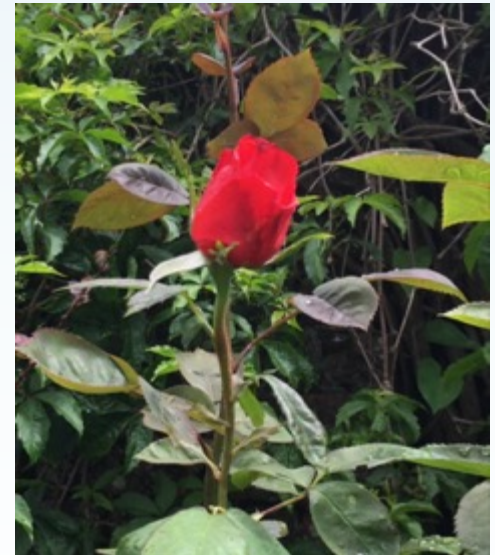
- Is there a connective storyline of enquiry, e.g. in the pattern of learning/research activities and assessments, which helps students to build their own coherent learning narrative?
- Is there a clearly constructed sequence of enquiry-based activities across the years of study that enables students to go beyond accumulating knowledge and develop themselves reflectively as critical, creative people?

UCL  
 Institute of  
 Archaeology  
 programme  
 overview:  
 ‘throughlines’ of  
 a) research and  
 b) global citizenship

	<b>Research throughline</b>	<b>Global citizenship throughline</b>		
<b>Year 1</b>				
Term 1	Introduction to Archaeology	World Archaeology	Sites and Artefacts	Social Anthropology
Term 2	Field Methods	World Archaeology	People and Environments	World Archaeology Option
<b>Year 2</b>				
Term 1	Interpreting Evidence	Current Issues in Archaeological Theory	Science/Skills Option	Free Option
Term 2	Research & Presentation Skills	Public Archaeology	World Archaeology Option	Free Option
<b>Year 3</b>				
Term 1	Dissertation	Fieldwork Portfolio	World Archaeology Option	Free Option
Term 2		Archaeology in the World	Science/Skills Option	Free Option

## A curated **Showcase Portfolio** challenges students to:

1. Review their work, as they select and perhaps edit for presentation
2. Revisit and learn from feedback on their work, including feedback from peers and external audiences/partners
3. Develop a holistic, analytic picture of the ground covered on the programme, including insights gained through active research and enquiry
4. Develop a stronger sense overall of the discipline(s) and themes and the ways in which they relate to one another
5. Articulate explicitly the perspectives and skills underpinning the range of work presented.



## A question of identity

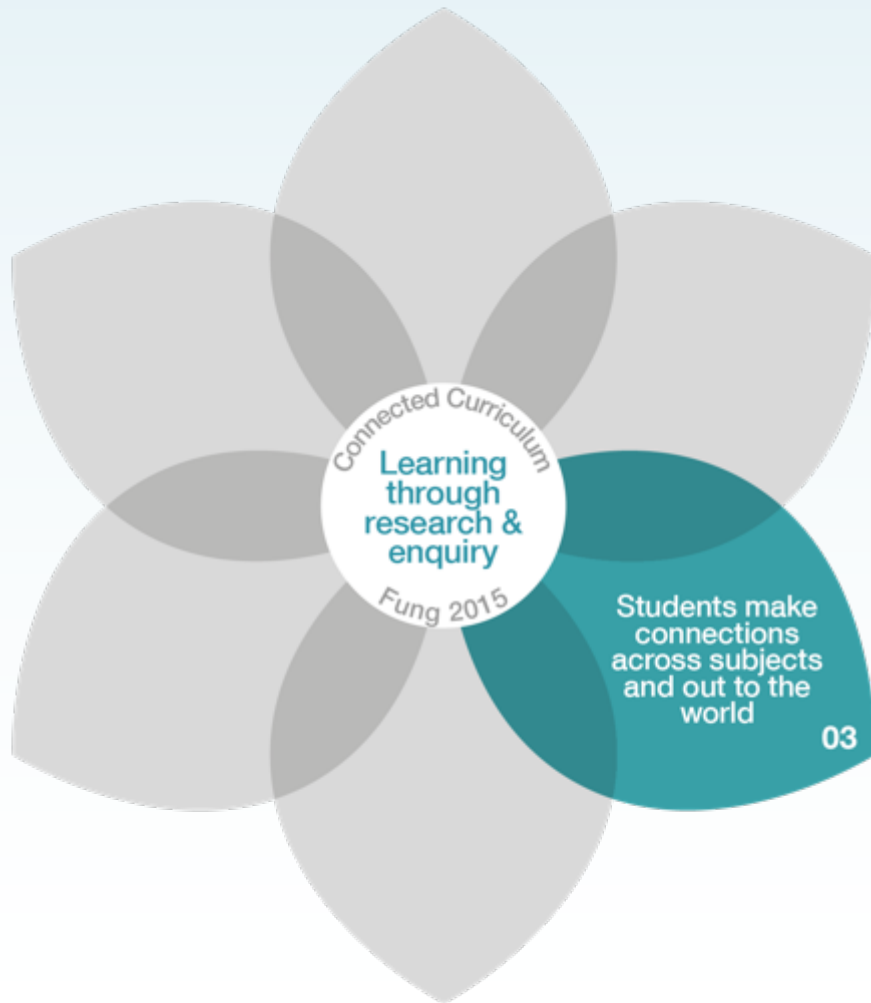
‘[T]here is no such thing as an intuitively obvious and essential self to know, one that just sits there ready to be portrayed in words. Rather we constantly construct and reconstruct our selves... Telling oneself about oneself is like making up a story about who and what we are, what’s happened, and why we’re doing what we’re doing.’

(Bruner 2002, 64)



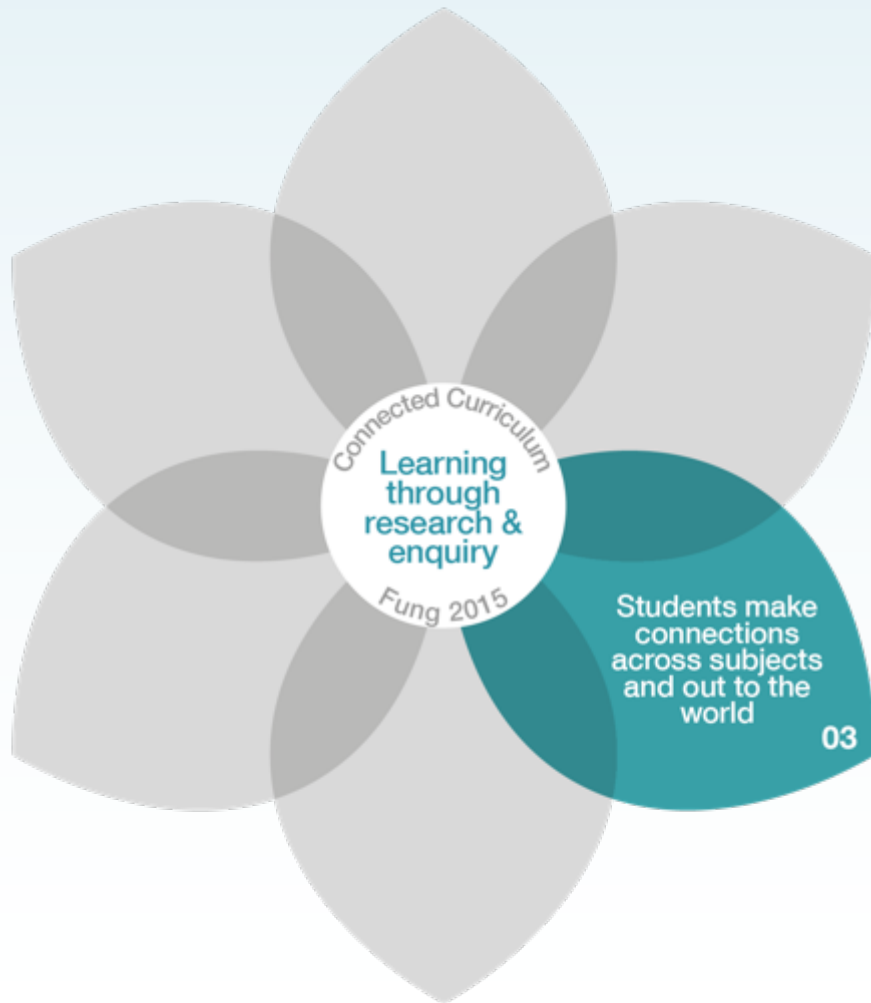


# Outward looking, interdisciplinary connections



- Can students connect outwards from their immediate subject(s) of study and learn to tackle multi-layered challenges using different ‘knowledge lenses’?
- In doing this, can they build understandings of and links with appropriate external communities and organisations?
- Are they encouraged to analyse their ethical bearings through developing research integrity, social responsibility and global citizenship?

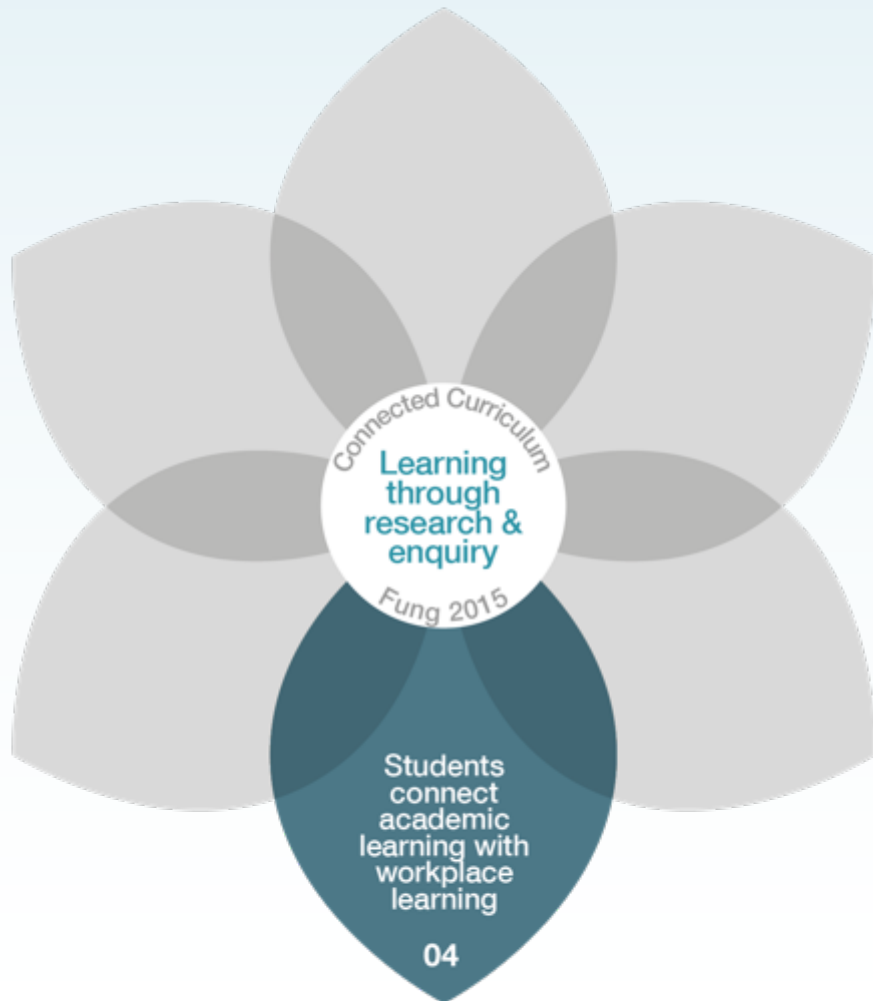
## Interdisciplinary examples



The innovative UCL BASc programme enables students to connect explicitly their learning in the arts with that in sciences, and with learning through work placements.

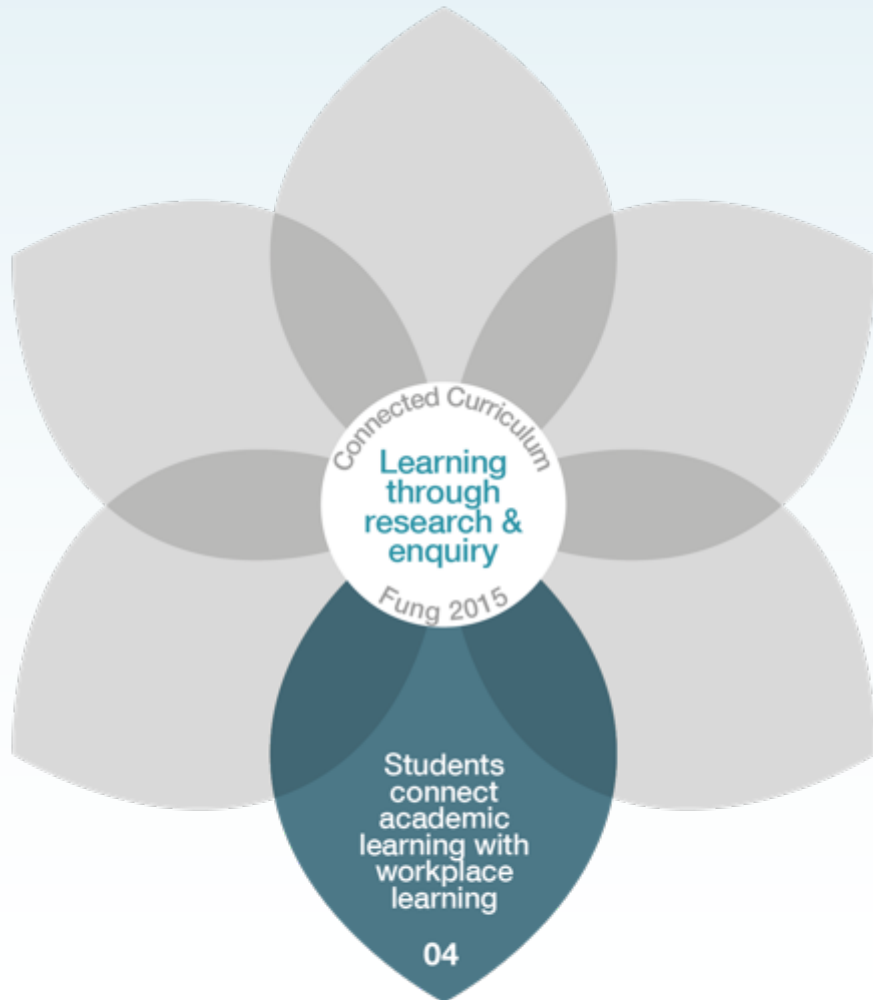
The UCL Integrated Engineering Programme (IEP) engages students in interdisciplinary team research challenges from the first term, in conjunction with external organisations.

## Workplace connections



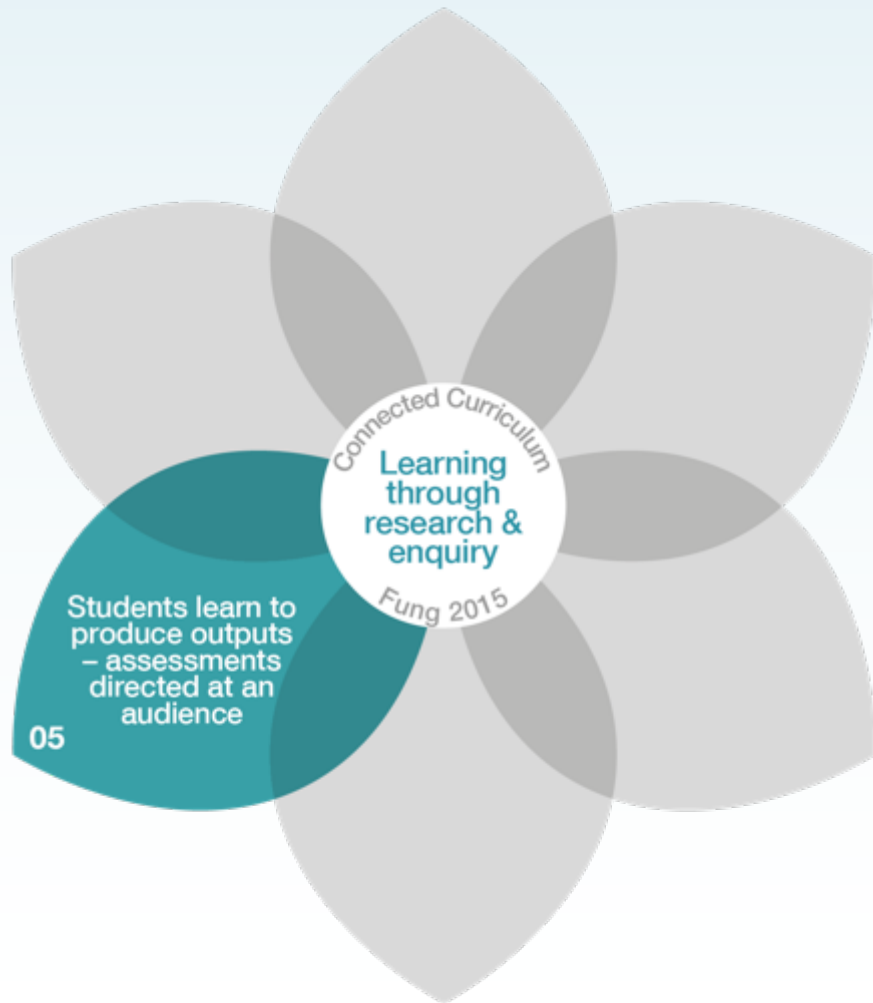
- Are students developing a range of professional attributes, such as leadership, project management, creativity, communication and problem-solving skills?
- Can students make and articulate conceptual and practical connections between their academic learning and the lifelong learning needed for employment and for their future lives?

## Workplace connections: example



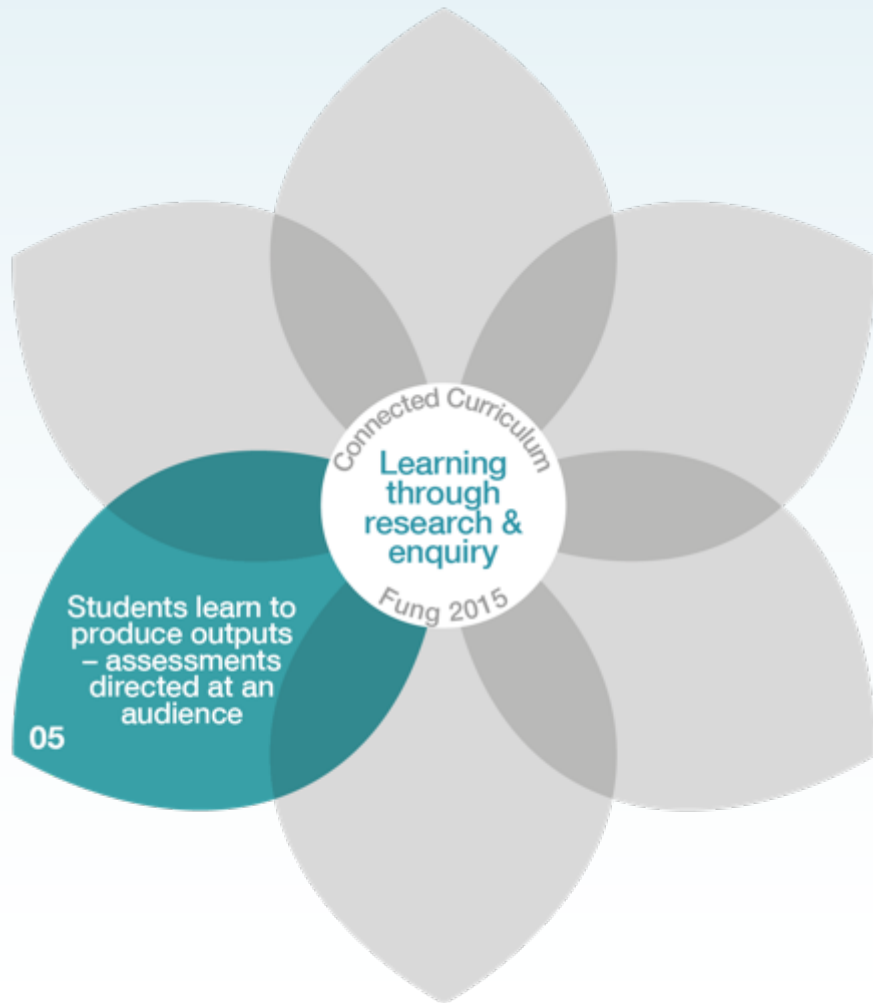
MSc students at the UCL Institute of Neurology programme undertake work-shadowing and observations, contributing to a patient newsletter.

# Outward-facing student assessments



- Are some assessments of student learning outward facing, directed at an identified audience, giving students a voice beyond the class?
- Can students demonstrate an ability to use a range of digital media effectively, as well as different modes of writing, visual and oral communication, as they express their insights and arguments to others, both within and beyond the institution?

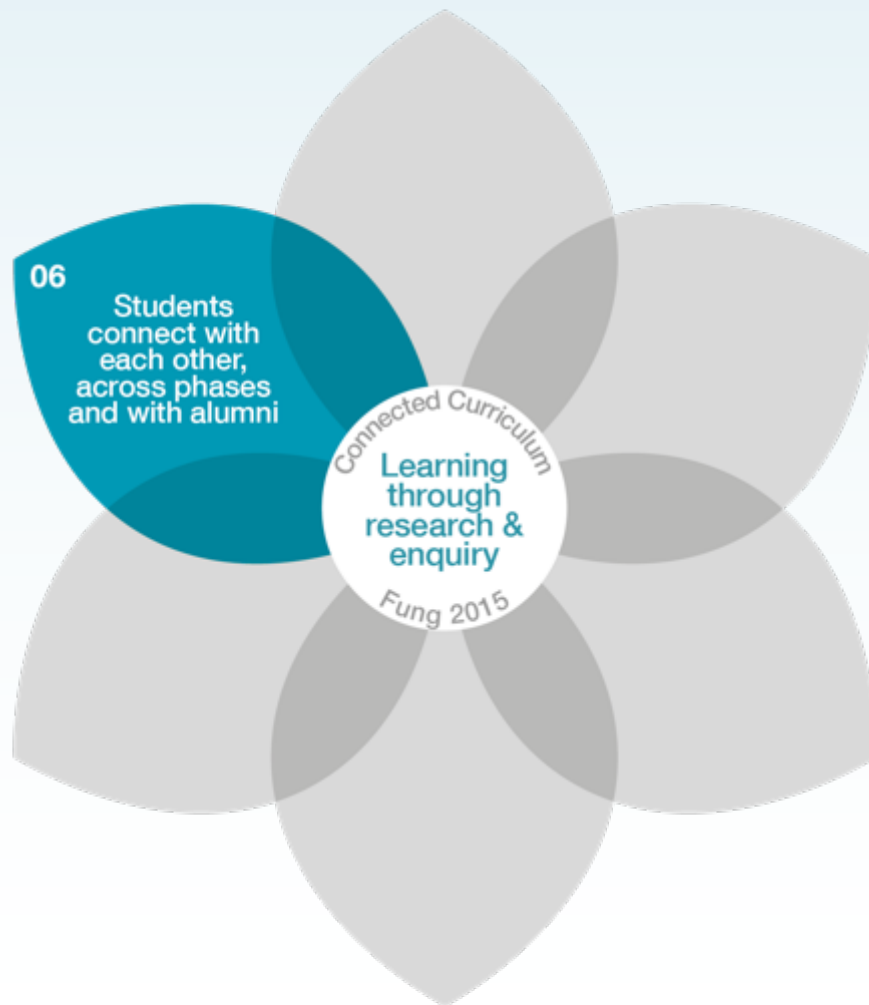
# Outward-facing assessments: examples



At UCL, students in Museum Studies develop a public engagement series and digital resources.

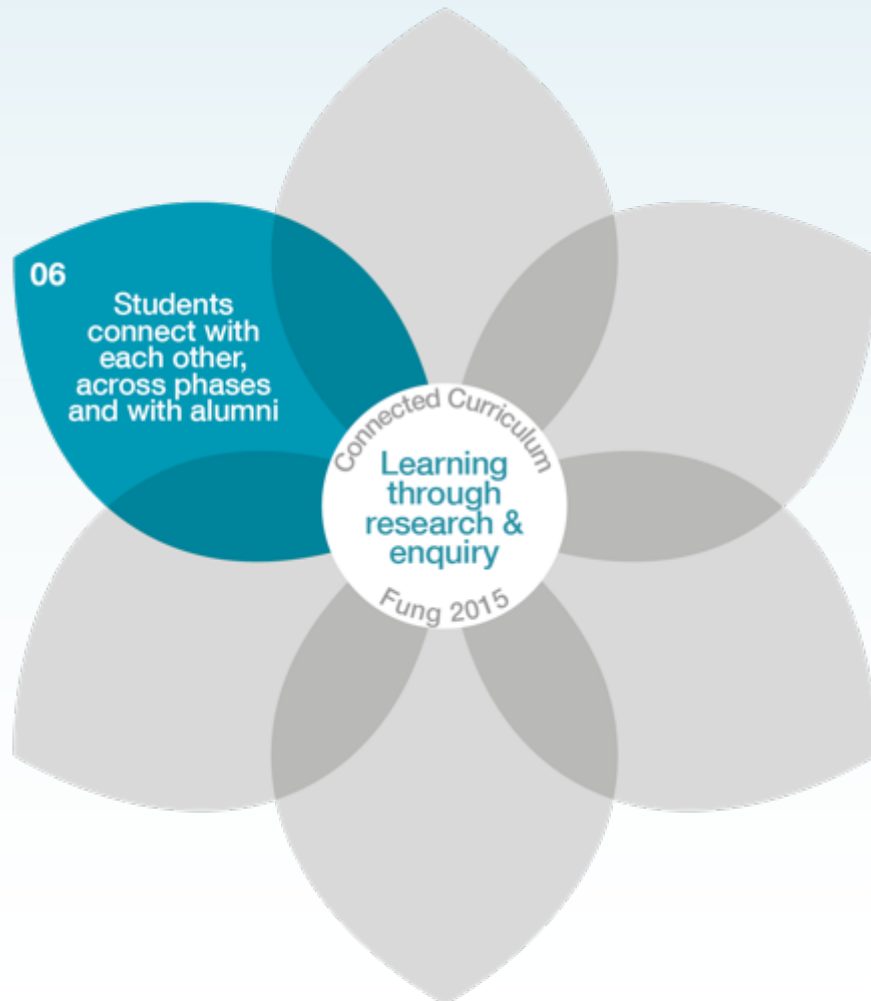
Other assessment modes being developed include grant bids, articles for specific journals, film documentaries, blogs, web pages, and posters for conferences.

# Human connections



- Are students explicitly invited into an inclusive research and learning community?
- Are there opportunities for them to meet, mentor and work collaboratively with their fellow students across year groups?
- Are alumni actively engaged in the learning and research community, e.g. by enriching the curriculum with their expertise, contributing to mentoring schemes or working with departments to enhance their educational provision?

# Personal and cross-phase connections: examples



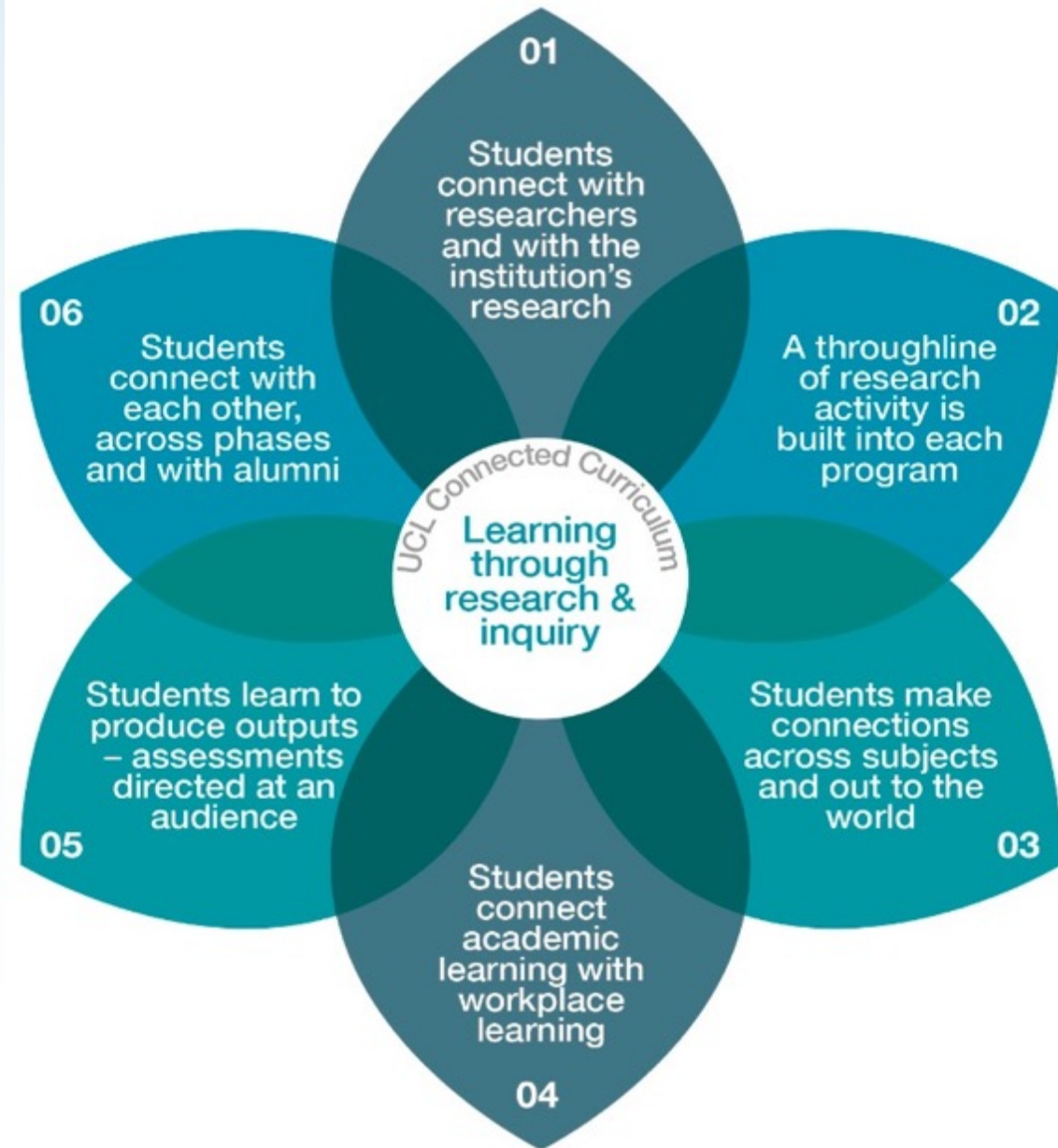
Final-year medical students teach junior students who are about to embark on working in a hospital ward for the first time.

Other examples include peer mentoring, peer study groups (timetabled but not roomed), alumni mentoring, UG/PG research seminars/conference, and shadowing



# The Connected Curriculum Framework

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 UCL Press: London



## **UCL ChangeMakers: students as leaders and agents of change**



**<http://www.ucl.ac.uk/changemakers>**

Co-creation to enhance the student learning experience.

Students and staff work in partnership with each other on education enhancement projects.

Projects involve teams of students partnering up with faculty members to investigate an educational issue and make improvements or to pilot a change and evaluate it.

# Rewarding educators and education leaders

(Fung and Gordon 2016)

If we break down some of the structural and conceptual divides between research and education, we can

- move towards achieving ‘parity of esteem’ for educators and researchers and
- develop distinctive new forms of research-based education



# Connecting is...

- Values-based
- Evidence-based
- Practical and efficient
- Academically and professionally stretching
- Empowering for the sector, institutions and individuals
- A way of modelling, and helping to create, a more connected and socially just society.



1.  United Kingdom
2.  United States
3.  Australia
4.  Canada
5.  Netherlands
6.  Ireland
7.  France
8.  Chile
9.  Germany
10.  China
11.  Switzerland
12.  Denmark
13.  Belgium
14.  South Africa
15.  Turkey
16.  Japan
17.  Spain
18.  India
19.  Slovakia
20.  Pakistan

## International responses

- Huge interest in the concept and possibilities for change
- More than 3000 downloads/copies of monograph purchased in first five weeks since publication (June 2017), in at least 88 countries
- More than 100 institutions and national organisations have invited us to advise/talk on the subject, engaging with both argument and underpinning values.

## LinkedIn feedback to a passage on foregrounding values-based, open-minded dialogue in higher education

“This is the purpose of the church. The purpose of HE is to create citizens who can be contributing members of society. Drs, lawyers, accountants, engineers...” (USA)

“[HE] has to redirect its mission and priorities, contributing to educate people in the complex sense of the word, teaching not only technical skills but values to live well and share with others.” (Mexico)

“[You] make a profound statement about our collective responsibility to ensure knowledge gained is applied in an ethical and morally responsible way.” (UK)

“It behoves us, I believe, to examine the processes of student learning and engagement with scholarship. How do we as scholars ensure that our students become best prepared for whatever comes next, whether it is the job readiness expected by industry or the empowered citizen expected of society?” (Australia)

## Concluding thoughts

‘The Connected Curriculum initiative ... provides an illustrative menu of practices and these will certainly vary in applicability... However, there is a consistent feature, a watermark: the philosophical commitment to critical enquiry informed by dialogue, to foster dispositions for testing what we think we know and to extending our knowledge horizons by connecting with those of others.’

(Fung 2017, 155)



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**Your questions and views**



**Blessinger, Patrick and Carfora, John M.** Eds. 2014. *Inquiry-Based Learning for the Arts, Humanities and Social Sciences: A Conceptual and Practical Resource for Educators: 2. Innovations in Higher Education Teaching and Learning*. Bingley, UK: Emerald.

**Brew, Angela (2006)** *Research and Teaching: Beyond the Divide* Basingstoke: Palgrave Macmillan

**Fairfield, Paul ed. (2011)** *Education, Dialogue and Hermeneutics*. London: Continuum.

**Fung, Dilly (2017)** *A Connected Curriculum for Higher Education* London: UCL Press <https://www.ucl.ac.uk/ucl-press/browse-books/a-connected-curriculum-for-higher-education>

**Fung, Dilly, Besters-Dilger, Juliane and Van der Vaart, Rob (2017)** *Excellent education in research-rich universities*. League of European Research Universities (LERU) Position Paper. [http://www.leru.org/files/publications/LERU\\_Position\\_Paper\\_Excellent\\_Education.pdf](http://www.leru.org/files/publications/LERU_Position_Paper_Excellent_Education.pdf)

**Fung, Dilly and Gordon, Claire (2016)** *Rewarding educators and education leaders in research-intensive universities*

[https://www.heacademy.ac.uk/sites/default/files/rewarding\\_educators\\_and\\_education\\_leaders.pdf](https://www.heacademy.ac.uk/sites/default/files/rewarding_educators_and_education_leaders.pdf)

**Gadamer, Hans-Georg (2004)** *Truth and Method* (Second, Revised ed.). (J. W. Marshall, Trans.) London and New York: Continuum.

**Harland, Tony (2016)** 'Teaching to enhance research.' *Higher Education Research & Development*. 35 3:461-472.

**Levy, Philippa and Robert Petrulis (2012)** 'How do first year university students experience inquiry and research, and what are the implications for the practice of inquiry-based learning?' *Studies in Higher Education* 37 1:85-101. <http://dx.doi.org/10.1080/03075079.2010.499166>

**Marginson, Simon (2016)** *Higher Education and the Common Good*. Melbourne University Publishing, December 2016

**Spronken-Smith, Rachel and Walker, Rebecca (2010)** ‘Can inquiry-based learning strengthen the the links between teaching and disciplinary research?’ *Studies in Higher Education* 35:723-740. doi: 10.1080/03075070903315502.

**UCL (2017)** UCL 2034: a new 20-year strategy for UCL

<http://www.ucl.ac.uk/2034>

**Wieman, Carl and Gilbert, Sarah (2015)** Taking a Scientific Approach to Science Education, Part I—Research and Part II—Changing Teaching. *Microbe*, Vol. 10(4), pp. 152-156 (2015) & Vol. 10(5), pp. 203-207 (2015)

**Wood, Jamie (2010)** ‘Inquiry-based Learning in the Arts: A meta-analytical study.’ CILASS (Centre for Inquiry-based Learning in the Arts and Social Sciences), University of Sheffield. Accessed 09 10 16: [https://www.sheffield.ac.uk/polopoly\\_fs/1.122794!/file/IBL\\_in\\_Arts-FINAL.pdf](https://www.sheffield.ac.uk/polopoly_fs/1.122794!/file/IBL_in_Arts-FINAL.pdf)