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**A Connected Curriculum for Higher
Education** by Dilly Fung

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Connecting students with one another and with alumni

1 Connecting with others

The sixth dimension of the Connected Curriculum framework, ‘Students connect with each other, across phases and with alumni’, focuses on the importance of human connections. It highlights the intellectual value for students of participating with their diverse peers in collaborative enquiry and the personal benefits of studying in a supportive community, for example via mentor schemes or connecting with alumni.

Why do these human connections matter? Making connections with other people, with their varying backgrounds and perspectives, is important for at least three reasons. First, it contributes to the development of students’ learning and especially to their critical thinking skills. Second, working and meeting with other students and alumni builds active networks, creating a sense of belonging to a community and helping to prepare students for the complex social demands of life and the workplace. More fundamentally for the Connected Curriculum initiative, learning with and from others is more than just part of the educational process: it is the *goal* of education. If we accept that education is rightly directed towards the common good, and is not just a set of opportunities for competitive individual advancement, its purpose might be defined as creating and sustaining productive human connections and collaborations. In this chapter we look first at a range of practical ways of achieving these human connections within and beyond the planned curriculum and then at the educational principles underpinning this approach. We conclude with our final set of vignettes of practice.

2 Practical approaches

How might we review the planned curriculum to ensure that it provides suitable opportunities for students to benefit from making connections with others? Table 8.1 offers a range of possibilities to promote discussion among departments and programme teams about whether any additional activities might be valuable in the local context.

Although this table focuses on undergraduate students, many of the same ideas can be used for students on taught postgraduate programmes. Peer study groups, mentoring schemes (with mentors drawn, for example, from the department's postgraduate research students) and meetings with alumni are all equally relevant to Masters students. Some of these examples are teaching and assessment methods, while others are informal. We will look at each of these briefly in turn.

3 Collaborative learning and groups assessments

Why ask students to work in groups and to collaborate as they learn? There has been a strong focus in higher education on independent working, at the expense of learning how to work interdependently and, as Bruffee (1999) argues, collaboration has been seen as something to be frowned upon rather than promoted. Yet working collaboratively 'teaches students to work together effectively when the stakes are relatively low, so that they can work together effectively later when the stakes are high' (Bruffee 1999, xiii).

Although some students will immediately take to collaborative tasks, others will find it particularly challenging, especially if they are not accustomed to it. However, if managed well and if students are given time to build up their group-related confidence and skills, setting students up to work together can have multiple advantages. The following are commonly identified:

- developing higher order thinking skills;
- building self-esteem;
- developing a range of communication skills;
- developing confidence and skills in the digital domain;
- encouraging understanding of diversity;
- developing collaborative problem-solving approaches.

Table 8.1 Promoting productive personal connections: some ideas for practice

Who connects?	With whom?	How?	For what purpose?
Students on arrival at university	Immediate peers	<ul style="list-style-type: none"> • Personal/academic tutorial group, using prompt questions to guide conversations • Timetabled small group meetings linked to collaborative investigative task (e.g. Meet the Researcher: see Chapter 3) • Online investigative peer group activity • Online discussion groups 	<ul style="list-style-type: none"> • Helping with transition (e.g. from school or workplace) • Building good working relationships • Cultivating a collaborative, investigative culture from day one • Setting expectations of regular engagement
	Established students	<ul style="list-style-type: none"> • Social events • Online social networking • Mentoring scheme 	<ul style="list-style-type: none"> • Help develop sense of belonging • Establish habits of engagement • Provide ongoing support
Established undergraduate students	Immediate peers	<ul style="list-style-type: none"> • Seminars and tutorial groups • Timetabled peer study groups, where 5–6 students meet (not roomed – i.e. students have to meet informally or online) to work on a set learning task, which can be reported on via tutorial groups or via virtual learning environment (e.g. discussion forum) 	<ul style="list-style-type: none"> • Develop good, collaborative working relationships • Enable students to explore new topics together without tutor present, to prepare for and/or follow up on classes • Promote a culture of peer support • Help overcome perceived barriers due to difference in background
	Senior peers on same degree	<ul style="list-style-type: none"> • Working together on collaborative assessments (e.g. projects, wikis, presentations, curating digital resources) 	<ul style="list-style-type: none"> • Co-develop new skills, e.g. planning a presentation, using new software applications • Raise awareness of ongoing opportunity for support

Peers on a degree programme in different discipline	<ul style="list-style-type: none"> • Mentoring • Students as teachers: e.g. second-year students help to teach key concepts to first years, in person or online, which enables them to consolidate own learning 	<ul style="list-style-type: none"> • Highlight need to consolidate new knowledge over time and share with others in future • Extend intellectual gaze beyond own discipline(s)
Postgraduate students	<ul style="list-style-type: none"> • Collaborate on interdisciplinary task/assessment, or on an extra-curricular activity • Undergraduate students attend informal seminar series in which postgraduate students present on their research 	<ul style="list-style-type: none"> • Make new personal connections beyond own department • Raise awareness of importance of undergraduate research
Alumni	<ul style="list-style-type: none"> • Undergraduates shadow postgraduate researchers for a day 	<ul style="list-style-type: none"> • Offer insights into how disciplinary knowledge is explored and extended through research
Alumni and peers	<ul style="list-style-type: none"> • Departmental meeting with successful alumni, encouraging active engagement • Undergraduate students organise an event/conference to showcase their work/research 	<ul style="list-style-type: none"> • Stimulate self-belief and raise awareness of future possibilities • Motivate students to engage; build skills and confidence; provide opportunity for feedback on work.

In addition, by working in cooperative groups, students learn to express themselves in the language of their subject discipline, and even develop stronger links with academic staff (Jaques 2000).

There are inevitably challenges associated with working in groups. There may be practical barriers: it can be hard for students to collaborate in a banked lecture theatre, or when opportunities cannot be found in the timetable for them to meet and work together, although online discussion facilities may help here. Working collaboratively stretches students, emulating the kinds of real-world tasks undertaken in the workplace. Research suggests that lecturers need to be aware of both the benefits and challenges for students of working with peers with culturally and linguistically diverse backgrounds (Moore and Hampton 2015). Effective working in diverse groups may be conditional on teachers preparing, coaching and debriefing students about the expected benefits associated with group work throughout the course (Sweeney, Weaven and Herington 2008).

Particular attention needs to be given to fairness in the design of the assessed group work, especially in designing transparent criteria for allocating marks (Caple and Bogle 2013). Although new technologies and 'big data' have potential for allocating marks more fairly (Williams 2016), allocating half the weighting in a collaborative task to a shared-group mark and the other half to a personal mark based on the individual's specific contribution may be a pragmatic approach. Again, virtual learning environments can be helpful here. For example, individual students' contributions to a wiki can be tracked and their contributions to the research for, and preparation of, a group presentation can be seen via an online collaborative forum.

Enabling students to provide and respond constructively to peer assessment and feedback (Nicol and Macfarlane-Dick 2006; Falchikov 2007; Carnell 2016) is another challenge but, undertaken with sensitivity, it can greatly enhance students' understandings of the expectations of the discipline. These understandings and skills are applicable to multiple contexts, including the workplace (Chapter 6).

The specific challenges of group work and collaborative assessments can certainly be seen as opportunities in a research-based curriculum. These activities afford opportunities for students to investigate *how* groups work and what the barriers are to effective collaborative practices (Jaques 2000). Students can be challenged to discuss related issues of equality and made aware of how research has highlighted the marginalisation of certain groups in social settings.

To create time in any one module or unit, for students both to take on a group project, including peer assessment *and* to investigate the skills, challenges and benefits of these activities, is a challenge; this is where,

once again, the value of a connected throughline of enquiry-based activities can be very helpful. Carefully designed, such a deliberate sequence of activities can sustain a focus on these issues throughout the programme. And if a programme-wide portfolio is ultimately employed, students can reflect analytically on what and how they have learned when collaborating with peers, as part of the curated presentation of their work.

4 Connecting beyond the curriculum

What is the status of activities undertaken by students beyond the taught curriculum? Students may for example take up optional co-curricular activities, such as engagement with a student society, a volunteering activity or the opportunity to lead an educational change project. Promoting such opportunities at appropriate points in the programme can be very helpful, building students' sense of belonging.

The lived environment again plays a part here; where students have easy accessibility to shared, comfortable spaces, they can build connections informally. However, there are typically great demands on physical spaces with rising student numbers and, of course, some students learn off campus (if there is a campus), and even at a considerable distance from the home institution. In these cases, many departments are finding innovative ways of building a sense of community. Shared flagship events or field trips, for example, can be invaluable, especially early in a programme so that students get to know one another more quickly.

Student cohorts can also build a strong sense of engagement and identity through online social networking. It is useful for departments to keep up-to-date with current guidance on possible options (see UCISA 2015). There can be a tension between requiring students to engage, for example, in a discussion forum on an institutional virtual learning environment and encouraging them to cultivate their own social networking groups. There is no single 'one size fits all' solution but engaging students in discussions about what works best for them right now can be useful: this is likely to change fairly quickly, with the changing popularity of social networking platforms, so an open atmosphere whereby everyone can share their ideas is invaluable.

A department adopting a Showcase Portfolio approach (Chapter 7) can in principle invite students to reflect analytically on dimensions of their wider experience as part of the final portfolio, if it suits the disciplinary context. However, some students can more readily access these co-curricular or extra-curricular activities than others. Some arrive at

university laden with economic, social and cultural capital; they may have, for example, sufficient resources not to need to undertake paid work, and the confidence borne of a particular kind of family and educational background. Other students may not have the time, confidence or inclination to take up extra-curricular opportunities. So putting too much store in any assessment scheme on rewarding students for going ‘above and beyond’ that which is required in the curriculum needs to be thought about carefully. However, a Showcase Portfolio can be a useful stimulus for connecting students across phases of study – for example, by inviting first-year students to become an audience for final year showcase presentations, whether in real time or online.

5 Working with alumni

It is worth revisiting the benefits, as well as the challenges, of maintaining links with alumni and of continuing to include them in the life of the department and institution. Of course by no means all alumni will either want to or be in a position to sustain a meaningful relationship with their institution, but some can and do. Across the higher education sector, there has been growing activity targeting alumni as financial donors, and, ethically undertaken, this can provide a valuable source of funding for the benefit of new students, especially those who may particularly need financial support. But there are other ways in which alumni can be invited to stay involved. Alumni can be invited to:

- Visit the department to encourage students to engage with their studies, for example by recalling their own learning experiences and outlining the ways in which the programme has influenced them in the workplace and in life more broadly.
- Promote further opportunities within the department, for example by talking to undergraduates about their experiences of postgraduate study.
- Attend selected departmental-level events, such as guest lectures, and participate in related discussions.
- Become involved in the development of high-profile events, such as an undergraduate research conference or a research-related poster competition.
- Act as a mentor for students in relation to a specific activity in the curriculum, such as interdisciplinary problem-solving tasks or independent research projects.

- Act as an adviser for student mentors, for example by speaking at a developmental event for mentors.
- Play a role in connecting students with audiences and partners for their outward-facing assessments.
- Take on the role of partner in helping the department to develop its educational provision (for example, enhancing curriculum content and design) and its wider provision (for example, developing a cross-cohort mentor scheme).

Within the limits of what is practical, enabling students to make links with alumni, even intermittently, can enrich their learning in many ways. Students will also know that, when they have graduated, the departmental and institutional communities remain open to them.

6 The value and values of human connections in education

Why should it matter if students connect with one another when they study? It is perfectly possible to argue that learning is a solo sport: that it is the individual who does the learning, who ultimately gets assessed on that learning and who receives an award. Learning can certainly happen when alone, for example through interaction with objects, and it has been quite common for academic literature on learning and teaching in higher education to see learning in terms of individual students engaging with their ‘object of study’:

Learning is about experiencing the object of study in a different way, where the experience is a relationship between the person experiencing and the object experienced. (Prosser and Trigwell 1999, 13)

However, a number of arguments can be set against this. First, a focus on human connections foregrounds the need to create an environment in which students participate as fully and actively in their studies as possible, rather than just assuming a passive role out on the edge. It speaks to raising students’ levels of overall engagement, and:

Engagement does not simply equate to the amount of involvement in and time on task, important though that is. It extends to learners’ engagement in communities of practice, to their involvement in a variety of networks and to the amount and quality of interchanges with others. (Knight 2002, 275)

We need to create spaces for such engagement, rather than filling up every corner of the curriculum with individual tasks. Barnett and Coate (2005) argue that there is a difference between ‘operational engagement’, whereby a student is getting on with a set activity, and the kind of engagement whereby she or he becomes fully, personally, authentically engaged:

She engages with the task in hand – with other students, with the problem, with the particular challenge – because she aligns herself to it wholeheartedly. She wills herself *into* the task. She tackles it with enthusiasm, with *élan*, with imagination. ... She and the task – in this moment – are one. It is *her* task. There is, in such an instance, a unity in being and learning. (Barnett and Coate 2005, 138–139)

Will all students experience this kind of engagement, all of the time? No. But understanding that learning is part of a deeper sense of self – as Barnett and Coate argue, that it is made up of knowing, acting *and* being – may help departments and students orientate themselves even more actively towards creating a curriculum in which personal engagement is specifically cultivated. Curriculum, defined in this way, is more than subject content, intended learning outcomes and taught classes. It is:

curriculum-in-action, which is the interplay of all those involved. (2005, 159)

And active engagement helps to prepare students to have agency in the world.

But the argument for human connections reaches beyond issues of engagement to the nature of learning itself. Sociocultural and social constructivist theories, developed by leading figures such as Vygotsky, Piaget and Bruner, point to the socially situated nature of new understandings; what we learn, and how we express and act on what we know, is profoundly affected by interaction with others. For Bruner, learning is not a solitary act. He highlights the extent to which meanings are constructed not just through solitary thought and engagement with the object of study but by means of ‘interpersonal negotiation’:

Meaning is what we can agree upon or at least accept as a working basis for seeking agreement about the concept in hand. (Bruner 1986, 122)

Bruner argues that ‘most learning in most settings is a communal activity, a sharing of the culture’ (1986, 127) and that ‘Social realities are not bricks that we trip over or bruise ourselves on when we kick at them, but the meanings that we achieve by the sharing of human cognition’ (1986, 122). Geertz argues similarly that:

Human thought is consummately social: social in its origins, social in its functions, social in its forms and social in its applications. (Geertz 1973, 360)

Of course, there are academic arguments contesting the extent to which knowledge is socially constructed: is there no foundational knowledge, nothing we can rely on? Bruffee (1999), in his work on collaborative learning in the humanities, rejects the idea that there is, or ever could be, a fixed and certain body of knowledge that students need to learn. Drawing on scholars such as Dewey, Rorty and Latour, he also cites Thomas Kuhn (1970), whose work on the structure of scientific revolutions highlighted historic shifts in scientific thinking and knowing. But, as we saw in Chapter 2, the term ‘research’ is conceived differently across and even within different disciplines; there are many who reject the relativist position described above, and are committed to the rigour of scientific method. Yet historians and philosophers of science continue to ask important questions, for example about the ways in which scientific knowledge changes over time and the cultural factors affecting its reception by society. Is scientific knowledge entirely independent of subjective human judgement? What is the relationship between observation and interpretation? Is the language used to communicate knowledge transparent or can it be value-laden? How is scientific research affected by structures of power and systemic inequalities in our society?

These are just some of the countless questions that can be asked about the nature of research, about what ‘good’ research is and about what it makes sense to say that we know, under what circumstances. The questions are nuanced and multi-layered. But this is the very strength of higher education: right across the sector, experts of every kind are shedding light on the synergies and contradictions of our emerging understandings of the world. To draw students explicitly into this rich landscape of dialogue, inviting them to investigate and to test evidence and argument, is to engage them in high-quality, research-based education. Collaborating with peers and connecting with alumni acculturates students into this dialogic space, prompting them to see not only through others’ eyes but also to see things more clearly through their own.

Research-based curriculum, well designed, can challenge diverse students to enquire, to test, to visit others who experience the world differently. It can prompt students to consider their own position in relation to the reliability of knowledge, its complexities and its edges. It can even foster new critical debate among academics, professionals and communities, fostering an intellectual energy that sparks new approaches to research and its application to the world.

In many respects, the sixth is the most straightforward of the dimensions of the Connected Curriculum framework. Promoting human connections, the building of productive relationships, may seem like an obvious aim. But in another sense it is perhaps the most profound. Higher education institutions are complex communities, with growing numbers of students and an increasingly diverse student body; it is not always easy for students to feel as if they belong or as if there is space for them to express themselves in the learning and research community they have joined. Designing a curriculum in which spaces are created explicitly for students to engage with others' perspectives, including unfamiliar conceptions of knowledge, is both an intellectual and a values-based endeavour. This dimension of the Connected Curriculum reminds us that:

[W]hile education is an ongoing process of improving knowledge and skills, it is also – perhaps primarily – an exceptional means of bringing about personal development and building relationships among individuals, groups and nations. (Delors/UNESCO 1996, 12)

7 Vignettes of practice

In our last set of vignettes, departments describe ways in which they are purposefully enabling students to connect with one another, across year groups, phases and disciplines, and with alumni. In the first vignette, students on different modern language degrees link up with museum collections to curate an exhibition. In the second, students connect with students from different year groups by participating in their own undergraduate research conference. The third vignette describes how students are benefiting from cross-year tutorial groups in Biomedical Engineering, and the fourth describes an innovative approach in Physics that enables students to produce videos on complex concepts for future students. The final vignette outlines an initiative that enables medical and pharmacy students to connect across a number of London hospitals.

1. Scandinavian Collections: Joint Danish and Norwegian Language Classes in the UCL Art Museum

Despite the similarities between the languages, students of Danish and Norwegian have often struggled to communicate with one another each using their language of study. Given the close ties between the countries, being able to navigate both languages in spoken and written form is an advantage that increases their readiness for employment. In 2015 we therefore established a collaboration with the UCL Art Museum and UCL Special Collections with the aim of combining joint Danish and Norwegian classes with research-based learning.

Through research and archival work, we compiled a list of Scandinavian items that are part of UCL's Collections. These items ranged from the engravings of illustrations used in a nineteenth-century travel book on Norway to documents relating to Scandinavian journeys undertaken by former UCL staff members. We then designed three joint Danish and Norwegian classes for each language year-group, an assessed project and an exhibition. During the classes all groups had to concentrate, though to a different extent depending on their language proficiency, on the description of the objects, the role of the museum and the intercultural connections between the UK and Scandinavia.

For the assessed project the students selected a Scandinavian object in the UCL Special Collections and conducted their own individual research. The students were also collectively responsible for curating the final exhibition and preparing all the exhibition materials in both languages. The exhibition, part of the UCL Festival of Culture, allowed the students to present their research on Anglo-Scandinavian history to academic and non-academic audiences.

The students of both languages embraced the project and showed a genuine interest in exploring the forgotten connections between UCL and Scandinavia. Working on these activities outside the classroom gave them the opportunity to use their language to discuss original case studies and created a greater sense of group dynamic across language and year groups. These, in turn, minimised difficulties in Danish-Norwegian intercommunication. Seeing students communicating about these objects, overcoming the issues that, in a traditional classroom context, are often perceived as language barriers, was extremely satisfying both for us and the students.

Vignette submitted by Dr Elettra Carbone (Senior Teaching Fellow) and Jesper Hansen (Senior Teaching Fellow), UCL.

2. The Student Biochemistry & Molecular Biology Conference at UCL

In 2013–14, we established the inaugural UCL Biochemistry & Molecular Biology Conference, an annual event that has been explicitly designed to provide a comprehensive and realistic research experience. It engages final-year research project students in the post-research process of presenting their work at a formal research conference as part of their assessment.

Previously students participated in a single week-long session of oral presentations but now students submit abstracts of their work in advance and these must be approved by their academic supervisor. These are triaged into specific presentation areas and the student talks are run at parallel presentation sessions over a single afternoon. This gives students the opportunity to enhance their critical reasoning skills. Liaising with their supervisors to discuss abstract submissions and presentations, they are introduced to the process of collaborative endeavour required to generate research outputs. They are then assessed by directing these outputs to an audience.

Student and staff engagement with the conference is excellent. Undergraduate students from years one and two attend the talks and this enables them to engage in the research process at all levels of the curriculum. The undergraduate research conference closes at a reception where the best student presentation receives prize monies from industrial sponsors who have attended the sessions and participated in the judging. These innovations provide students with an enjoyable opportunity to present their work to an audience and participate in a learning experience that is closely allied to the academic research experience. Staff enjoy the opportunity to provide a learning experience that is more closely allied to the academic research experience and future employers are engaged in teaching and assessment.

Submitted by Prof Andrea Townsend-Nicholson, Prof Elizabeth Shephard and Suzanne Ruddy, UCL.

3. Tutorials enabling Students to Connect across Year Groups in Biomedical Engineering

Tutorials provide an opportunity for students to reflect on their learning, make holistic connections between modules and see their

subject in a broad context. We have restructured the tutorials in our Biomedical Engineering programme so that each tutorial group includes students from all years of the programme. The main reason for this change was to encourage students to connect between year groups so that newer students can learn from more experienced near-peers and so that students reaching the end of their programme can recognise how much they have learned and matured.

This approach gives practical help to newer students by involving established students in tackling the problems they face, allowing them to form their own support groups organically without the commitment required by a formal mentoring programme. Pedagogically, we aim to use tutorials to emphasise continuity throughout the degree, enabling students to form connections between their learning year-by-year, and to see how their understanding and expertise develops through the programme.

An initial feedback questionnaire suggested that students in the later years of their degree felt that they would gain less from this scheme than new students. We have tackled this concern by scheduling tutorials to ensure that each session contains material relevant to all students and by retaining year-group tutorials in cases where there is material that is only relevant to one year group. An additional benefit is that the tutor's role increasingly becomes one of facilitating problem solving between students. This means that the tutor needs less programme-specific knowledge, allowing a broader range of staff to get involved in tutoring.

We are reviewing the new tutorial system by monitoring students' feedback with questionnaires, which we will use to refine our approach as the programme develops.

Vignette submitted by Adam Gibson, Professor of Medical Physics, UCL.

4. The 'Physics concept' video at UCL

Students working in small teams are asked to make a short video to explain a concept from one of their Physics modules that they themselves have found difficult. The best videos are then passed to the lecturer for the relevant module to be included as part of the online resources for that course.

It is known that learning through teaching can be valuable, and here the students are revisiting material from other modules that they found

(Continued)

challenging, as well as learning it well enough to teach it. In addition, future cohorts can benefit from the material generated because more videos, useful to a range of modules, are produced every year.

Allowing the students to choose the topics that were difficult for them provides the lecturers with insights into which aspects students are struggling with, as well as mitigating the problem in future years by providing specifically targeted resources. With the students producing these resources, it also lessens the load on the lecturer.

Another benefit from this piece of coursework is the social aspect. Students are in small randomly assigned groups of around four, so they work with people they might not have known before. This task is run early in the course for this reason – to try to provide for the students a group they feel they belong to and can go to if they have any problems on the course.

The marking of the coursework is largely based on the question of whether the video would help other students struggling with that topic or not, as that was the aim, but includes criteria relating to whether other students are likely to remember what the video has taught them. Creativity is strongly encouraged! For this reason, only a small quota of marks is given to the ‘technical accomplishment’ of the videos although, in cases where the technical accomplishment aids the teaching (for example, where animations are used to explain something more clearly than could be achieved with diagrams), then higher marks can be given for the work they have produced.

The outcomes of this piece of coursework are excellent. Students embrace the chance to unleash their creativity and some very useful and memorable teaching videos have been created. The students on the whole enjoy the project and the chance to showcase any artistic talent, with most of them appreciating the opportunity to work in groups. Success!

Vignette submitted by Elinor Bailey, Teaching Fellow at UCL.

5. ‘Be the Change’: pan-London Medical School Initiative

‘Be the Change’ was a new initiative piloted in 2015–16, launched with the aim of empowering medical and pharmacy students to become healthcare leaders, both of today and the future. During this pilot year, the initiative ran as a pan-London medical school competition, where teams from each medical school competed to develop the best portfolio of student-led quality improvement projects.

As part of the larger UCL team, our specific project was to assess whether a virtual reality mobile phone simulator (*Touch Surgery*) could be a useful educational adjunct for medical students learning clinical skills procedures. We went on to test this hypothesis by running a randomised medical education trial, and the project subsequently developed into something much more substantial than we were initially expecting! Nevertheless, as a new student-led initiative, we faced significant challenges without formal funding or previous academic credence. Therefore, to ensure the success of the project, and to highlight the viability of student-led initiatives for the future, we were required to independently recruit experts in statistics, clinical skills and medical education. In addition, as a ‘pop-up’ group, we had to search for money from unconventional funding sources (e.g. medical leadership organisations, conference competitions). Despite these challenges, the project was an overall success and we managed to recruit nearly 30 students into the trial. Our results showed that virtual reality simulators did not have the same efficacy as gold-standard educational resources, yet they were markedly better than students repetitively practising procedures on the wards alone. This was a significant finding, since gold-standard clinical skills training resources are not always available to medical students whilst on hospital placements, and mobile phone simulators are freely available to students at all times. Ultimately, our project showed the viability of a well-supported, student-led and student-delivered medical education initiative. And, along with the rest of the UCL team, we went on to win first prize in the overall ‘Be the Change’ competition.

Submitted by Richard D. Bartlett, MBPhD medical student at UCL researching tissue-engineered therapies for spinal cord repair, and project leader of one of the student-led UCL ‘Be the Change’ projects.