

Reinvention Centre Background and Rationale

(taken from Part I of the Centre's two-year evaluation report to HEFCE)

Introduction

[...] evaluation is not simply about making judgements about whether the concrete goals in an institutional change strategy have been achieved. It is about ways of capturing transitional shifts in the institutional culture, which may not be possible to measure quantitatively, but which are important to understand the outcomes of improvements made. Achieving an adequate insight into these transitions requires a different approach to evaluation from one that simply attempts to measure observable outputs. As well as collecting data on whether targets have been met, evaluation is also about understanding what is happening and giving a vivid account about the 'state of play' (D'Andrea and Gosling, 2005:198).

This evaluation aims to provide a 'vivid account' of the work of the Reinvention Centre to date, which it will achieve in two key ways. Firstly, the discussion integrates documentation of the Centre's activities and achievements – the 'observable outputs' – with critical analyses of the outcomes from applied evaluation and research. From the outset, applied evaluation has been central to the ongoing development of the Centre. Drawing on aspects of action research, this evaluative function forms part of the work of all members of the Centre and is informed by the theoretical traditions and conceptual frameworks developed in the academic subject areas in which we are located.

Secondly, the evaluation of the work of the Reinvention Centre is firmly situated within the terms and considerations of the policy debates informing the CETL initiative. In line with this, the discussion here explicitly recognises the social, political and economic contexts within which our work is taking place. Further, it aims to evaluate critically the complex and dynamic relationships between day-to-day events and activities within the host institutions, institutional policy developments, and broader intellectual debates about teaching, learning and the contested nature of the university itself. These debates are outlined in the following sections, which aim to provide an overview of the contested field of Higher Education and, within this context, to present the theoretical and methodological concerns informing the work of the Reinvention Centre and the content and form of this evaluation report. To begin, we turn to consider the ways in which teaching, learning and research are central to contemporary policy debates.

Teaching, Learning and the University

The Reinvention Centre for Undergraduate Research is funded by the Higher Education Funding Council for England's (HEFCE) Centre for Excellence in Teaching and Learning (CETL) initiative. The primary aim of the CETL programme is to raise the level and quality of teaching and learning in Higher Education.¹

In originally proposing the Reinvention Centre, we embraced the conclusions of the Boyer Commission in the United States,² inspired by the earlier work of Ernest Boyer. Boyer points out the imbalance between research and teaching and argues for a reconfiguration with teaching recognised as important and fundamental part of academic life. He provides a framework and a baseline on which to consider the relationship between teaching and research. Boyer was concerned with reinventing the relationship between teaching and learning in HE in the US: 'The most important obligation now confronting colleges and universities is to break out of the tired old

¹ The CETL funding has involved the distribution of approximately £300 million to 81 centres in 58 different institutions (74 CETLs in 54 institutions in England; 7 CETLs in 4 HEIs in Northern Ireland), the biggest single investment in teaching and learning in HE.

² The Boyer Commission's report is available to download in full at <http://naples.cc.sunysb.edu/Pres/boyer.nsf/>

teaching versus research debate and define in more creative ways what it means to be a scholar' (Boyer, 1990: xii). He formulated this debate within four versions of what he referred to as 'scholarship': the scholarship of discovery – research; the scholarship of integration – interdisciplinary connections; the scholarship of application/engagement – knowledge applied in wider community; and the scholarship of teaching – research and evaluation of your own teaching (Boyer, 1990). However, the Boyer Commission, in advocating an Academic Bill of Rights, including a commitment for every university to provide 'opportunities to learn through enquiry rather than simple transmission of knowledge' (p.12) acknowledges the influence of a much earlier educational thinker, John Dewey (1938), and his observation that 'learning is based on discovery guided by mentoring rather than on the transmission of information' (p.15).

Building on this view of learning, there are a number of powerful arguments as to why and how research-based teaching and learning can raise the level and quality of teaching and learning in Higher Education. These include the points that research-based learning effectively develops critical academic and evaluative skills that are used to support problem-based and inquiry-based learning and raise the level of the somewhat more traditional project work (Wieman, 2004). Research-based learning equips students to continue learning after tertiary study, making links to the lifelong-learning agenda (Brew, 2006:14). In addition to the demands of the 'knowledge society' (Scott, 2002:13), research-based learning encourages students to 'construct' knowledge through increasing participation within different communities of practice (Cole, 1990; Scribner, 1985), and can be set against the traditional, positivist model of teaching, where faculty experts are transmitters of knowledge to the passive student recipient. Research-based learning exemplifies a social-constructivist view of learning (Vygotsky, 1962, 1978; Bruner, 1986, 1990), changing the relationship between student and teacher, with students becoming active collaborators and co-producers of knowledge in a joint enterprise, encouraging participation and retention as well as 'elevating degree aspirations' and degree completion while at the same time increasing the likelihood that students will decide to go on to postgraduate work (Pascarella and Terenzini, 2005:407).

In addition to raising the level of teaching, another aim of the CETL programme is to enhance the status of teaching and learning as a professional academic activity and thereby challenge the domination of research in Higher Education (DFES, 2003). It is intended that this transformation in the status of teaching, and with it the culture of Higher Education, will not only take place within the institutions to which the money has been awarded, but across the wider Higher Education community (HEFCE, 2004). This policy implies that any discussion of teaching and learning in Higher Education must involve not only a consideration of what goes on in the classroom, but the role, function and nature of the university itself.

As the burgeoning literature testifies, the role, function and nature of the university are subject to increasingly intensive debate as Higher Education undergoes profound transformations at the national and international level.³ There is no longer any consensus about the 'idea' or the 'uses' of the university (Newman, 1873; Kerr, 1963), if there ever was. Universities are being 'realised and reshaped' (Barnett, 2000; 2005), 'rethought' (Scott, 1995; Rowland, 2007) and 'redefined' (Scott, 1998). While some regard these transformations positively, others feel that these changes undermine the academic mission of the university, leading to 'crisis' (Scott, 1984), 'de-professionalisation' (Nelson and Watt, 2003), 'corporatisation' and 'commercialisation' (Aronowitz, 2000; Bok, 2003; Slaughter and Leslie, 1997; Callinicos, 2007), 'ruination' (Readings, 1996) and even the 'death' of the university itself (Evans, 2004).

Programmes forming part of the CETL initiative, such as the Reinvention Centre for Undergraduate Research, are well positioned to help identify and realise connections between national and international policy-making, and the localised experiences of teaching, learning, research and administration within contemporary universities. It is therefore imperative that such programmes contribute to these debates, and that the impact of their input can be effectively evaluated. In the

³ 'In the last ten or twelve years, British Higher Education has undergone a more profound reorientation than any other system in the industrialised world.' (Halsey, 1995: 302).

case of the Reinvention Centre, a substantive focus of our contribution pertains to what is often referred to as the 'research-teaching nexus'. The contested and multi-faceted nature of this relationship informs the aims of the CETL initiative and is at the heart of wider debates about the nature of the university itself.

Research and Teaching: redressing the balance?

It has been well documented that the field of Higher Education is characterised by the severe imbalance between teaching and research (Brew, 2003). Key to the CETL initiative is the concern to address this imbalance, with the aim of raising the status of teaching (HEFCE, 2004). The relationship between teaching and research is integral to debates about the future of the university. As Angela Brew (2006) argues:

The relationship between teaching and research is intricately embedded within ideas about what universities do and what they are for. It is fundamental to what is understood as higher learning and to ideas about the nature of the academy. Understanding this relationship raises substantial questions about the roles and responsibilities of higher education institutions, about the nature of academic work, about the kinds of disciplinary knowledge that are developed and by whom, about the way teachers and students relate to each other, about how university spaces are arranged and used, indeed, it raises fundamental questions about the purposes of higher education (Brew, 2006: 3).

These fundamental questions are central to the work of the Reinvention Centre for Undergraduate Research, a Centre for Excellence concerned with the relationship between teaching and research in general, and the support of research and teaching at the undergraduate level in particular. The fact that the Reinvention Centre is based in two universities with very different institutional histories, the University of Warwick and Oxford Brookes University – making a link between the 1960s expansion in university education, the Polytechnic experiment 1965-1992, the emergence of a group of research-intensive universities, and the unifying project of the post-1992 arrangements – means that the work of the Centre has a unique contribution to make to these discussions. This contribution is informed by the theoretical resources which we utilise in order to explain and critique the ways in which the work of the Reinvention Centre forms part of a larger intellectual project working to transform higher education.

In the following section, we locate our theoretical orientations in relation to a number of 'ideal-type' models, as put forward by Skelton (2005). These models and their descriptors help map out different possibilities for conceptualising the role, function and nature of the university. They do so through a consideration of the diverse ways in which the concept of 'excellence' in universities can be understood. While clearly integral to the work of CETLs, 'excellence' is a highly contested concept. A careful delineation of what excellence in teaching and learning might mean is therefore an important foundation on which to develop subsequent discussion and against which to evaluate meaningfully the contribution of the work of the Reinvention Centre.

The Concept of Excellence

As Skelton (2005) argues, the concept of excellence is contested, but he suggests that 'alternative views can enhance people's understanding of teaching excellence, helping them to develop an informed and critical personal standpoint' (2005: 25). To this end, he outlines four 'ideal-types' within which the concept of teaching excellence in Higher Education might be framed: traditional, performative, psychologised and critical. In the *traditional* model, knowledge is pursued for its own sake and the university serves as a cultural record and repository as well as providing the means of enhancing the society in which it is embedded. The *performative* model, which has come to dominate current debates, conceptualises Higher Education in terms of the contribution it makes to the national economy in a context of increasing global economic competition. At the level of the

university curriculum, teaching programmes are designed to be flexible, innovative and individualised in order to enhance students' skills and employability. In contrast, the *psychologised* model, drawing on cognitive and behavioural psychology, establishes what is to be learnt and how it is to be taught via a focus on personality and learning styles. In this model, didactic, content-led teaching is thought to have limited value since it fails to recognise what students already know and ignores the ways in which they learn. Students are encouraged to take responsibility for their learning, which takes the forms of peer and collaborative work as well as reflexive learning activities. Finally, the *critical* model recognises that teaching is inescapably political, and therefore it is not possible to speak of the disinterested production of knowledge for its own sake, or to regard teaching and learning as simply instrumental. Rather, critical teaching must take into account issues of social justice and personal empowerment, which can be achieved in the classroom through democratic forms of teaching, widening access to universities, promoting issues of equality and enabling student collaboration as well as independent learning. Skelton (2005) argues that while critical pedagogies have made limited impact, their influence is increasing in response to growing uncertainty about what constitutes the nature of the university as well as opposition to the commercialised and market-driven agendas dominating educational debate.

Models of Change

While recognising the limitations of ideal-types, these models provide a useful framework for helping clarify what might be meant by 'excellence' in teaching and learning according to diverse ideas about what the university is, or should be. Crucially, the frameworks through which CETLs understand and evaluate their own performance are directly linked to their own conceptualisation of the role, function and nature of the university. In order to account fully for the ways in which the work of the Reinvention Centre understands excellence in teaching and learning, thereby elucidating the terms within which our applied evaluation takes place, we turn briefly to re-consider the models already outlined. In so doing, we build on Skelton's (2005) descriptors by paying attention to the strengths and weaknesses of the different conceptualisations and by examining the models of *institutional change* which are implied by each of these ideal-types. As we have already highlighted, understanding institutional transformation is at the core of the CETL initiative and a prerequisite of fulfilling the requirements of successful educational evaluation (D'Andrea and Gosling, 2005). On the basis of these considerations, we present our rationale for grounding the work of the Reinvention Centre within an informed 'critical' position in relation to institutional change.

The *traditional* model implies that unnecessary change is to be avoided. In the traditional model, change is informed by, and takes place through, professional academic practice that is based in academic authority as well as the customs and traditions of academic subjects. While this model is academically grounded, it can be seen as elitist and failing to respond to dynamic social transformations taking place outside of the 'ivory tower'.

The *performative* model sees change as incremental and driven by evidence-based evaluations. Indicators of excellence, as measured through audit and performance reviews, including student experience and satisfaction ratings linked to learning and teaching strategies, are of central importance. Such evaluations provide mechanisms through which teachers are made accountable for the work they do, in ways that are not only regulatory but also provide a framework for the enhancement of teaching and learning. However the managerial and bureaucratic discourses and processes make the performative model of social change an anathema to many academics, particularly in the humanities and social sciences, for whom change is a more complex social phenomenon.

For the *psychologised* model institutional change is part of a developmental process based on cognitive change and consciousness raising, providing the tools and the strategies for individuals and institutions to learn and adapt. This model provides much of the intellectual framework for literature concerned with teaching and learning in Higher Education and the basis for the generic model that teachers are encouraged to use and adapt for their own teaching. The weakness of this

model of institutional change is that it does not connect very strongly with the customs and traditions of other academic subjects and discipline areas in HE, and, for that reason, is often regarded as lying outside of, and even contrary to, the main interest of the academics in subject areas other than psychology.

Finally, the *critical* view sees institutional change as the outcome of conflict and struggle, forming part of much wider social, political and economic context beyond the institution. This approach, which can claim much of its legitimacy from the work of Paulo Freire (1970), the student protests in 1968 and progressive forms of teaching and learning developed as a result of these influences, aims to democratise radically the process of knowledge production at the level of society. For this critical model, institutional and social change is not the product of incremental policy changes, strategic planning or teaching innovation, but emerges out of much wider social, political and economic processes, resulting in 'paradigm shifts' (Kuhn, 1970) and revolutionary transformations in the practice of teaching and learning.⁴

The Reinvention Centre is committed to the critical framework for excellence, using it to distil the most progressive applications from the traditional, performative and psychological paradigms. Critical in this sense does not mean 'negative judgements', but the awareness of the progressive possibilities that are inherent in even the most contradictory and dysfunctional contexts.

In these introductory sections we have described the ways in which we locate our work within the context of contestations about the university, in particular debates pertaining to institutional change by means of excellence in teaching and learning. Building on the theoretical approaches outlined above, we now turn to consider the ways in which we have carried out an applied evaluation of our work to date.

Applied evaluation: methods and methodologies

'Philosophers interpret the world; the point is to change it' (Marx, 1848).

The pedagogic research undertaken by the members of Reinvention Centre, with additional independent input where appropriate, can best be described as an applied evaluation utilising multiple methods and drawing on features of action research.⁵ Action Research has been described as being a way of bringing 'scholarship and praxis (practical action) together' (Reason and Bradbury, 2006: xxiv). It does this by:

- Responding to practical and pressing issues in the lives of people in organisations and communities;
- Engaging with people in collaborative relationships, opening new communicative spaces in which dialogue and development can flourish;
- Drawing on many ways of knowing, both in terms of evidence that is generated and diverse forms of presentations through which we can engage with wider audiences;
- Being strongly value orientated, seeking to address issues of significance concerning the flourishing of human social relations, communities and wider ecologies;
- Emerging as an organic process which cannot be predetermined but changes and develops as those engaged deepen their understanding of the issues to be addressed and develop

⁴ With regard to research-based learning Tagg and Barr refer to a paradigm shift as having taking place in US HE. *From Teaching to Learning: A New Paradigm for Undergraduate Education – from instructional to productive learning paradigm* <http://critical.tamucc.edu/~blalock/readings/tch2learn.htm>

⁵ To this end, every member of the Reinvention team completes a questionnaire every six months which asks them to evaluate critically their activities over that time, and we re-assess our priorities accordingly. We also have an official external evaluator, Professor Angela Brew of the University of Sydney, and we have been pleased to secure the services of other external colleagues (for example David Gosling of Plymouth University) as "critical friends". In order to keep up to date with evaluation procedures amongst other CETLs, the Centre Academic Manager has joined the CETL evaluation network, which is proving to be a very useful source of information and support.

their capacity as co-inquirers both individually and collectively (Reason and Bradbury, 2006: xxii).

Although action research is by no means limited to a Marxist interpretation, this practice has flourished as a form of liberatory and emancipatory research around the world (Freire, 1970; Kane, 2001), taking it beyond the more narrow focus of institutional change through which it is more regularly practiced (Reason and Bradbury, 2006).

As the introductory section has made clear, the scope of this evaluation goes beyond a narrow assessment of the activities of the Reinvention Centre in an institutional context, in order to engage with the wider policy implications of our work. Nonetheless, our research practice is grounded by being embedded within the institutions and subject departments/schools within which the Reinvention Centre is located: the School of the Built Environment at Brookes, and the Department of Sociology at Warwick. The applied evaluation, as well as the writing of this report, has been collaboratively undertaken by staff with administrative, clerical and academic responsibilities contributing to the work of the Centre from across both institutions. This approach aligns with the traditional model of institutional and social change, in that it is based on professional academic values and is informed by the radical and critical frameworks which seek to promote progressive institutional transformation extended to the wider higher education community.

Critical Indicators in a Theoretical Framework

This report is written in the context of the five stated general ambitions on the front of the original funding proposal. These are to:

- Reinvent the teaching and research nexus by bringing students more closely into research cultures;
- Support student engagement and the acquisition of critical skills and self-reflexivity;
- Support deep learning of the subject;
- Enhance final-year performance;
- Increase the acquisition of employability skills.

Following on from these critical success factors, we set specific targets for ourselves which included:

- An expansion of the number of modules across the faculties in which there are undergraduate research opportunities;
- The production of impact studies against benchmarks developed in relation to undergraduate research activity;
- Generation of Reinvention Centre Fellowships for academic colleagues;
- An increase in students' research capabilities to be demonstrated through the evaluation of final year performance in the two universities;
- Substantial use of new facilities to support undergraduate research;
- An expansion of online support to enable undergraduate research in the disciplines;
- An increase in the take-up of accredited extra-curricular undergraduate opportunities, including learning in the community;
- The development of cross-sector student and staff collaboration and exchanges between the students and staff of our two universities;
- Dissemination of Reinvention Centre initiatives in other UK universities, as well as a range of professional, statutory and voluntary organisations and the Higher Education Academy.

These ambitions and critical indicators are located within an intellectual (and organisational) framework made up of three 'working concepts': Student as Producer, Teaching in Public and

Teaching for Complexity. These concepts have been established through the life-time of the Centre and they increasingly form the basis of much of our work. As such they have become the conceptual means through which we work towards the aims and ambitions outlined. The ways in which these working concepts help organise our work is reflected in the use of the concepts to structure the remainder of this report.

This issue of grounding our work in an academic and intellectual framework that extends beyond not only our initial proposal, but also further than the teaching and learning discourse on which much of the teaching and learning literature is embedded, has already been recognised as a key issue in evaluating the effectiveness of the CETLs and is regarded as an important factor in deciding the extent of any lasting impact by the CETLs. Gosling and Hannan (2007) argue that many of the CETLs are working with 'largely undertheorised practice' and that this is a weakness when it comes to providing a validation of practice which would not be 'useful or convincing to others in the sector'.

In order to invigorate and challenge the frameworks that have been established around the practice of research-based learning, the Reinvention Centre has developed a number of conceptual frameworks within which to position the work of the Centre in a way that is intellectually convincing and coherent. These concepts are: Student as Producer, Teaching in Public and Teaching for Complexity.

Student as Producer

The concept of student as producer is derived from student slogans in 1968 '*We work, but we produce nothing*' (Cohen-Bendit, 1968); Freire's '*conscientisation*' (1970); Debord's '*Society of the Spectacle*' (1970); Pratt's '*Polytechnic Experiment, 1965-1992*' (1997); Barr and Tagg's '*productive learning*' (1995); Bishop's '*viewer as producer*' (2006). The concept implies that by connecting research and teaching undergraduate students become productive collaborators in the research culture of the department. This is particularly important in a context within which students have been forced into the position of consumers in a service culture that many academics regard as antithetical to academic excellence (Lambert *et al*, 2007). The concept of student as producer encompasses all of our funded work, as detailed below on pp. 15-25, and is the theme for our 2007 conference (p. 26 below).

Teaching in Public

This term was first developed in conjunction with our teaching room at Westwood (see below pp. 28-30), the plan to develop a streamed video to broadcast the activities in the room around the campus and on our website, and proposals to extend this facility to other teaching rooms on campus that are designed in the style of the Westwood space. Although we have not yet set this up, it is very much part of our plans for the room and for the campus. The concept has been made more substantive with the ways in which public 'not-teaching' spaces on campus at Warwick are being used for teaching with Reinvention support, the most visible example of this being the teaching that takes place in the Mead Art Gallery in Warwick Arts Centre. Both of these connect and develop our interest in the spaces within which teaching and learning takes place, which is a central Reinvention theme.

Teaching in Public is linked to the notion of Public Sociology (Burawoy, 2005), within which academics and their students are encouraged to get involved with issues of public concern outside of the campus. This also embraces the notion of public intellectual to include students as well as academics. This very much involves the kind of community links that the Reinvention Centre is

making in a whole range of ways, not least the Brookes Community Research Fund and the work with the Thames Valley partnership.⁶

The concept also provides the space for the Reinvention Centre to generate a debate about the efficacy of providing higher education as a 'public good' (rather than a commercialised service) along the lines of the terms and conditions outlined by the UN Charter for Human Rights and in contradistinction to the current increasingly marketised provision of the 'student experience'. The extent to which the Reinvention Centre is affecting the debate in HE is evidenced by the fact the concept of Teaching in Public is the theme for this year's international conference for the Higher Education Academy's subject centre in Sociology, Anthropology and Politics (see <http://www.c-sap.bham.ac.uk/>). The concept of Teaching in Public encompasses our dissemination work, our creation of new learning spaces and our community engagement activities, as detailed below on pp. 26-38.

Teaching for Complexity

In this section we set out our critique of the concept of supercomplexity, a notion that is gaining increasing prominence within HE teaching and learning circles. We counterpose the concept of supercomplexity with the notion of complexity.

Barnett (1997) argues for research-based teaching on the grounds that we now live in a 'super-complex' society that is 'not just unknowable; it is radically unknowable' (p. 4), and in which the university is reduced to 'a site of organised enquiry for generating and managing uncertainty' (p. 18). For Barnett 'what is required is not that students become masters of bodies of thought, but that they are enabled to begin to experience the space and challenge of open, critical enquiry' (Barnett, 1997: 110).

While agreeing that the social world is uncertain, we disagree that it is unknowable. Indeed, it is precisely through teaching students 'bodies of thought' that social science can continue to renew and reinvent itself in the face of increasing complexity. While the social world may be increasingly complex, a reinvigorated social science should be able to convey that complexity as well as the reasons for it clearly and coherently. In the moment of the super-complex, a world that is radically unknowable, the idea of the university is lost.

In order to know our world we have to research it, including the world of HE. This section will include all of the various research that has been done by the Reinvention Centre (see pp. 38-42 below).

The Future of the University

The Reinvention Centre is one of 19 CETLs based in more than one university. Warwick and Brookes have a record of previous relevant collaboration among the core team through a number of projects (Project LINK; a Phase 5 FDTL project in the Scholarship of Engagement in Politics) and both institutions fully supported our collaborative bid. The decision to submit a collaborative bid had a pedagogic and economic rationale and was underpinned by a confidence in the collaborative model already established. Pedagogically, we were concerned to support an inclusive model of undergraduate research across the UK sector; economically, the Centre could pool the considerable gains and outputs from externally and internally funded initiatives from both institutions.

⁶ The Thames Valley Partnership is a voluntary organisation that seeks to create safer and stronger communities through longer-term and sustainable solutions to the problems of crime and social exclusion. They work with criminal justice partners, local authorities, voluntary and community organisations and the private sector. More information may be found at www.thamesvalleypartnership.org

The collaborative nature of the Reinvention Centre has been both challenging and invigorating. The Centre team across both institutions has an excellent working relationship; those based at each institution hold a weekly meeting, with one in every four of these being a joint meeting of the entire Warwick/Brookes team. More formally, the Centre at each institution has a Management Committee – meeting four times per year – comprising Centre staff and other members of the core team, along with institutional representatives; we also have a joint Steering Committee which includes senior staff from both Warwick and Brookes and external representatives, which meets twice per year.

Initially some concerns were raised that too much staff time might be spent in travel, but these have proven to be unfounded, as we find that regular interaction is a major advantage for the sharing of ideas. Members of the team communicate frequently, whether face-to-face, via email or telephone, or via video-conferencing. Some early glitches caused by each institution having different traditions or different procedures on various issues were overcome, and although the implementation of the Centre at Warwick and at Brookes may differ, this may be seen as an opportunity for the sharing of practice rather than a disadvantage. At an institutional level, a contractual agreement was agreed and signed at an early stage in the Centre's life. One of the aims which we set out in our original bid was to enhance the collaborative experience via the regular exchange of students between institutions. These exchanges have not been as frequent as we might have envisaged, mainly due to the exigencies of setting up and establishing the Centre in each of its host departments. We intend to promote further exchanges in the future and to create more synergy between our respective departments.

The nature of this collaboration, across two very different types of University, allows the Reinvention Centre to look beyond an institution focus and to consider its own work and the CETL programme as a whole, across the HE sector. An important condition of the CETL funding was how the programme would affect the sector as a whole and the Reinvention Centre has taken this responsibility seriously from the outset. This approach connects the Reinvention Centre to the debates about what goes on in the classroom and the role and the nature of the University itself. At the end of this paper we will consider in what ways our work can make a contribution to the future of each University, Warwick and Brookes, and to the HE sector as a whole.

Our main point is that the current dichotomy between teaching and research means that universities are unable to maximise the full potential of the resources that constitute and contribute to the life of the university, with the undergraduate as the yet-unrecognised resource. In order for these resources to be maximised, the relationship between teaching and research needs to be reconfigured in ways that enable and allow those resources to be liberated and developed in ways that are beneficial to all of those involved. This does not mean that teaching and research are simply integrated into an already existing system, but that teaching and research are recognised as the organising principles of the university: the structuring dynamic around which everything is arranged, and that the university is reorganised or reinvented accordingly. The strength of the model that we are proposing is that it does nothing to undermine the real nature of the university, but works by intensifying the core activities of Higher Education: research and teaching/teaching and research.

This concentration on the relationship between teaching and research in order to make teaching more like research, and research more like teaching, is not to impose a framework within which all else must be included, but rather to set up a dynamic and, at times, contradictory relationship out of which all manner of forms of teaching, learning and research can emerge, as yet unimagined. This ambition to invent and reinvent forms of teaching and learning and the production of knowledge in ways that are beyond our imagination is not meant as another academic self-indulgence, but is suggested as a way of confronting and dealing with social, political and economic problems that appear to be beyond our capacity for meaningful intervention and certainly not resolvable within the terms we currently understand.