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**Rethinking the values of higher education -  
the student as collaborator and producer?  
Undergraduate research as a case study**

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## Foreword

Many terms and phrases are used to describe the relationship between universities and students, such as 'consumers', 'active participants', 'co-producers', 'partners', 'community of learning' and 'apprentices'; all are useful, but each has limitations and particular connotations.

When the Quality Assurance Agency for Higher Education (QAA) made the decision to include students as members of Institutional audit and review teams, consequently imbuing them with the authority and responsibility that come with the role, we were asked questions about what this implied about the relationship between students and the higher education sector. Given the level of interest in this and the amount of times QAA was asked for an opinion, we felt it was appropriate to commission some 'think pieces' from a range of leaders in the sector with different perspectives.

Dr Paul Taylor and Danny Wilding from the Reinvention Centre for Undergraduate Research at the University of Warwick have produced the following piece entitled *Rethinking the values of higher education - the student as collaborator and producer? Undergraduate research as a case study*. This follows the recently published piece by Wes Streeting and Graeme Wise of the National Union of Students, entitled *Rethinking the values of Higher Education - consumption, partnership, community?* that sets out a positive vision of the relationship between student and institution.<sup>1</sup>

*Higher Ambitions*, the Government's higher education framework, together with its impending review of variable fees in England, has placed the student experience and changing relationships between students, their institutions and their learning at the heart of current debates. These pieces are important contributions to that discussion and, together with others to follow, will be welcomed.



**Anthony McClaran**  
**Chief Executive, QAA**  
**November 2009**

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<sup>1</sup> Available on the QAA website: [www.qaa.ac.uk/students/studentEngagement/Rethinking.pdf](http://www.qaa.ac.uk/students/studentEngagement/Rethinking.pdf).

# **Rethinking the values of higher education - the student as collaborator and producer? Undergraduate research as a case study**

**By Dr Paul Taylor and Danny Wilding**

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## **Introduction**

Recent years have seen a profusion of policy documents focused on higher education (HE) in the UK. For example, in 2008 the Secretary of State for Innovation, Universities and Skills commissioned nine reports on the future of higher education (DIUS, 2008). Increasingly, there is concern from stakeholder groups about the levels of student engagement with such policy initiatives and a substantial report (Little et al, 2009) was launched early in 2009 by a coalition of these groups (UUK event, 2009).

'Engagement' can be defined as 'participation in' or 'involvement in'. We add a notion of commitment, drawing on an older meaning of engagement as a 'pledge' (cf. engaged to be married) and on the French 'engagé'. 'Engagement' is the opposite of 'alienation', as noted by Mann (2001, p 8). 'Alienation' can be defined as 'the state or experience of being isolated from a group or an activity to which one should belong or in which one should be involved'.

The Reinvention Centre for Undergraduate Research, a Centre for Excellence in Teaching and Learning (CETL) at the University of Warwick and Oxford Brookes University,<sup>2</sup> proposes that positioning undergraduates as researchers challenges the 'hierarchical binaries between teaching and research, and teachers and students' (Lambert, Parker and Neary, 2007, p 534), thus offering a profound model of student engagement. Indeed, Lambert (2009, p 295) presents undergraduate research as a 'participatory pedagogy' with 'scope for critical and constructive intervention in relation to some of the damaging trajectories of educational reform in the UK and elsewhere'.

The particular contribution of this paper to the discussions around student engagement in higher education thus comes from its emphasis on undergraduate research. Firstly this paper will outline a framework in which to understand student engagement before exploring the potential for developing increased and meaningful student engagement both in and through the practice of research. In doing so this paper aims as well to challenge the traditional hierarchical binary between teachers and students, and to confront the growing discursive notion of students as 'chooser and more demanding consumers of the higher education experience' (Mandelson, 2009) that is so prevalent in recent Government policy.

McCulloch (2009, p 173), drawing on McMillan and Cheney (1996), shows how the student as consumer metaphor has 'obscured' aspects of HE. For example:

The student's role in the production of learning is de-emphasised and thus learning itself may be diminished [...] students who have internalised the metaphor tend to act in a passive manner.

The Reinvention Centre's work provides an ongoing critique of the student as consumer metaphor (Lambert, Parker and Neary, 2007) and has offered an alternative concept, 'The student as producer' (The Reinvention Centre, 2007; Neary and Winn, 2009). What follows in this paper on student engagement can be viewed as a response to the national (and international) policy suggestions outlined herein, drawing on our experience as the Student Engagement Officer and the Director, respectively, of the Reinvention Centre for Undergraduate Research.

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<sup>2</sup> [www.warwick.ac.uk/go/reinvention](http://www.warwick.ac.uk/go/reinvention).

## Student engagement

Mann (2001, p 17) invites us to move from a 'focus on surface/strategic/deep approaches to learning' in HE to a 'focus on alienated or engaged experiences of learning'. Drawing on the literature on alienation, she offers 'seven different perspectives on how we might understand this [alienated] experience of higher education'. In the following discussion, we explore how this theoretical backdrop can inform practical initiatives in student engagement.

Case (2008, p 328) elected to telescope Mann's seven perspectives on alienation into a more 'manageable' framework, in which researchers, and HE practitioners, can consider:

- the reasons why students are choosing to participate in our programmes,
- the experiences they have of trying to gain access to this new community,
- and their experiences of assessment as they attempt to succeed in the system.

Herein we focus on the first aspect of Case's framework, 'the reasons why students are choosing to participate in our programmes', and start to explore how undergraduate researchers within the CETLs, including the Reinvention Centre, are providing new perspectives on student engagement.

## Undergraduate research in the national context

Two of the nine aforementioned reports to the Secretary of State for Innovation, Universities and Skills suggested, in one case, that all curricula should 'incorporate research-based study for undergraduates' (Ramsden, 2008, p 11) and in another that 'Research Councils should work with universities, research institutions, charities and industry to develop a national Research Experience programme for undergraduate students' (Thrift, 2008, p 2). Enquiry and research-based learning appeared to be assuming national importance.

Regardless of the fate of these reports in the recent Government reorganisation, undergraduate research seems likely to maintain a high profile, both nationally and internationally, with the US President highlighting its importance to the future of science and technology in the USA in a speech to the National Academy of Sciences:

The Department of Energy and the National Science Foundation will be launching a joint initiative to inspire tens of thousands of American students to pursue [careers in science, mathematics and engineering]. It will support an educational campaign to capture the imagination of young people and will create research opportunities for undergraduates and educational opportunities for women and minorities who too often have been underrepresented in scientific and technological fields. (Obama, 2009)

The Reinvention Centre for Undergraduate Research clearly supports the suggestion of more 'research-based study' (Ramsden, 2008), 'research experience' (Thrift, 2008) and 'research opportunities for undergraduates' (Obama, 2009). Yet, the Reinvention Centre's aspiration is for undergraduates to have the opportunity to be **fully engaged** with the research culture of their university, which is troublesome in the prevailing model of HE in the UK that sees the 'student as consumer' (McCulloch, 2009, p 171).

Recent research carried out at the University of Warwick finds that 'the research-led environment is presented as the optimum learning experience' (Mockridge et al, 2009, p 66). Yet Mann (2001, p 9) has pointed out evidence that many students now 'drift' into HE as something that is considered normal. Given this, it seems likely that for many students the research-led environment is of marginal importance and that they may be largely unaware of their institution's research culture in the absence of activities to engage them.

Emerging models of student engagement with CETLs may provide part of the solution, offering a meaningful and effective interface between students and initiatives that are supposed to benefit them, and are discussed later in this paper. We should state clearly that we are not denigrating

students who do not engage with research culture. Rather, we seek to draw attention to the centrality of 'informed choices' in the 'student as consumer' model of HE, as explored below.

### **The importance of informed choice**

In recent years, and particularly with the increase in tuition fees and present discussion about a possible further increase in the near future, there has been a growing discourse around the 'student as consumer'. In his critique of the concept McCulloch (2009, p 172) argues that:

The notion of the student as consumer has driven much change within universities, not only within academic areas where 'quality', and its maintenance and its enhancement, have dominated agendas over the same period, but also in areas such as student support and institutional marketing. It has given a new perspective from which the university can be examined, managed and strategically developed.

For the purposes of this part of our discussion we shall focus on one part of McCulloch's critique (2009, p 174):

Models of consumer behaviour place great weight on the 'consumer' being able to make informed choices, and on the role played by information in ensuring that those choices are the correct ones for the individual consumer. The significance of this in the British higher education system can be seen in the emphasis placed on information provision in the various parts of the UK Quality Assurance Agency for Higher Education's Code of Practice (Quality Assurance Agency [QAA] 2004). There is, however, a case for arguing that, as far as the learning process is concerned, students are not well placed to exercise 'informed choice', because they do not have the necessary information (and tools to use it) to do so.

This is an interesting insight, but assumes a deficit model of being 'not well placed' on the part the students. Another interpretation is that 'information provision' through benchmark statements, stated learning outcomes and so on is a mechanism for a dominant group to articulate a code of practice that will be clear to that group and difficult to comprehend by others. Margolis et al (2001, p 2) argue that the 'Hidden Curriculum' is often hidden 'in plain sight'. We suggest that thought should be given to how learning outcomes are articulated. Who develops benchmark statements and learning outcomes and how are they expressed?

Allowing students to determine learning outcomes challenges the 'student as consumer' discourse, but collaborative approaches to the shaping of learning outcomes could give students increased ownership of the outcomes while maintaining the accountability that the student as consumer model demands. Such involvement would perhaps go some way to preventing students from feeling like changes in curriculum are being 'done to them' and would instead foster a sense that changes were being 'done with them'. This would allow the student full insight into the pedagogic principles that drive curriculum changes and the perceived benefits that such changes are expected to have for students' education. In turn this would arguably lead to a greater sense of ownership of the development of HE.

### **Student engagement in practice**

We now examine how emerging models of **meaningful** student engagement with institutions can start to re-create the notion of an inclusive academic community where learners, teachers and researchers are all seen as scholars and collaborators in the common pursuit of knowledge. Using student engagement with CETLs as a brief case study, we consider firstly how we can engage students, who may have little awareness of research, with the idea. Secondly, we describe initiatives aiming at meaningful student engagement in curriculum review, including incorporation of undergraduate research. Finally, we examine the experience of students who wish to publish their research outputs, using *Reinvention: a Journal of Undergraduate Research* as a case study.

## **CETL engagement models**

Centres for Excellence in Teaching and Learning (CETLs) resulted from a significant HE policy initiative in England in 2003/2004. Reflecting back on the work of various CETLs provides some insight as to how students might be meaningfully engaged with research and to how HE institutions manage to capture the interest and imagination of those students who have not previously given much thought to undertaking research. A small-scale survey of approximately one-third of CETLs undertaken by the Student Engagement Officer and an undergraduate representative of the Reinvention Centre found that many made no use of a systematic method of student engagement. Instead they decided on ad hoc practices, such as sending emails to suitable departments, use of typical promotional materials and a tendency to depend on the same student to be involved in numerous CETL projects.

However, a small number of CETLs had a very well developed model for student engagement that fitted well with their overall individual ethos, often making use of a network of student representatives in every department or faculty within its host institution. While these models do not provide a 'one-size fits all approach' for other CETLs or teaching and learning initiatives, they do offer a starting point for critical discussion about how best to systematically engage students in teaching and learning initiatives. A systematic model of student engagement has a number of benefits, as follows.

Firstly such a model allows the promotion of undergraduate research, or other initiatives, to as wide a student population as possible. Students cannot be engaged in research if they are unaware of and do not fully understand the opportunities available to them. In addition, by being more methodical in engaging students over time it will become evident which types of student are systematically under-represented in research activities, presenting us with a target population whose ideas and feelings towards undertaking research we can begin to investigate.

Secondly, the systematic models of engagement frequently make use of students as representatives of the CETLs, not solely as publicists of the CETL but as researchers for the CETL as well. These students are given the intellectual freedom to critically explore and enhance the work of the CETL, empowering them by not only utilizing their ability to undertake research but by engaging with their ideas and seeking to implement them where they can be most appropriately and effectively used. This model of engagement, giving students both administrative and research responsibilities that tie in with the ethos of the CETL, fosters a more inclusive academic community surrounding the CETL than those relying on ad hoc measures of recruiting students to specific CETL projects, and provides us with a potential way forward when considering how best to meaningfully engage students in HE as a whole. As we mentioned above when setting out the theoretical position of this paper, we argue that such CETL practices can start to re-emphasise the role of the student in the production of learning (McCulloch, 2009). They are a small but positive step towards creating the notion of an inclusive academic community where students and academics are at once recognised as learners, teachers, researchers and collaborators in the common pursuit of knowledge.

## **Student engagement in curriculum transformation**

Apple (1993, p 144) views curriculum not as a 'thing' but as a 'symbolic, material, and human environment that is ongoingly reconstructed'. The student as consumer model and, in our case, the problematic relationship between teaching and research (Brew, 2003 and 2006), leave little space for students as agents of this ongoing reconstruction. In this section, we offer examples of how we can address this.

Earlier this year, the Higher Education Funding Council for England, through King's College London and with the University of Warwick as partners, funded a pilot project on curriculum transformation called the Graduate Pledge.<sup>3</sup> The project identifies five key 'graduate capabilities',

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<sup>3</sup> [www.kcl.ac.uk/learningteaching/warwick](http://www.kcl.ac.uk/learningteaching/warwick).



which all graduating students should have had the opportunity to develop within their curriculum of study. These graduate capabilities include experience of research-led learning environment, global knowledge, interdisciplinarity, community engagement (nationally or internationally) and academic literacy. The aim of this project is to highlight, through the use of case studies, areas of good practice at both King's College London and the University of Warwick across these five capabilities and to provide 'blueprints' in these areas that other HE institutions may wish to adopt.

The Reinvention Centre is centrally involved in the University of Warwick part of the project and has taken this study as an opportunity to experiment with student engagement, as follows.

Firstly, in collaboration with the students' union we have consulted staff-student liaison committees at the outset of the project, asking for critical feedback on the project. This is helping to clarify what different 'capabilities' might mean in a University of Warwick context, and to prioritise their importance and identify gaps in the proposal. For example, the need for an advanced understanding of environmental sustainability was not included as a 'graduate capability', yet seems to be of significant importance to some students at the University of Warwick and merits further research.

Secondly, and at a much more profound level of student engagement in curriculum transformation, the Reinvention Centre has assembled a collaborative research team of undergraduate, postgraduate, postdoctoral and academic researchers. This team will carry out documentary, observational and focus group research around the provision (and claims made regarding the provision) of these five graduate capability areas across various curriculum at the University of Warwick. The central involvement of undergraduate researchers is ensuring this research is firmly grounded in authentic experience and represents an 'engaged experience of learning' as advocated by Mann (2001, p 17). For the undergraduate researchers this meaningful engagement in the research culture of the university has so far served to re-emphasize the student's role in the production of learning (and in the production of knowledge). Certainly we can state with confidence that the experience of the undergraduate researchers working on the project has not been a passive experience, as McCulloch (2009) warns can be the case for students who are allowed to internalize the metaphor of the 'student as consumer'. We see this clearly in the following reflexive account by an undergraduate researcher working on the Graduate Pledge:

One of the main new insights that I have gained in my role as a student researcher, is the concept of academic literacy. I have realized through our research that there are many ways to conceptualize a student, and these vary by institution, department and even lecturer. I see myself more now as both a learner and contributor to the education process. The concept of academic literacy has made me realize that my education should equip me to engage not just with my lecturers but also with practitioners, employers, local and international communities. Consequently, I have gained an appreciation for the different components of higher education and the importance of constantly reviewing and even challenging the role of teachers, researchers and students in this environment. (Mockridge et al, 2009, p 20)

Crucially, as a collaborative team we plan to critically evaluate the research process undertaken during the Graduate Pledge project to gain insight into this process of student engagement with institutional change. Of particular interest will be the perceived weight given to the undergraduates' research by the wider university community. The issue of recognising undergraduate students as being both capable of research and able to contribute to the production of knowledge is one that has often arisen as a result of the work undertaken by the Reinvention Centre. This can clearly be seen when drawing on some of the experiences of another collaborative team at *Reinvention: a Journal of Undergraduate Research*.

## The status of undergraduate research: a case study

*Reinvention: a Journal of Undergraduate Research* (hereafter, *Reinvention*) is an online, multidisciplinary, peer-reviewed journal, dedicated to the publication of high-quality undergraduate student research. *Reinvention* is produced, edited and managed by students and staff at the University of Warwick and Oxford Brookes University. It is both an experiment in publishing and an experiment in collaboration between students and academic and administrative staff. The critical, reflective editorials (Metcalf, 2007; Metcalf, 2008; Gibson et al, 2008; Lambert and Metcalf, 2009) document the reaction of the academic community to the notion of undergraduate researchers as they submit work for publication. As such, the editorials allow us to end this paper with a glimpse of the issues we might see when responding to the second invitation from Case (2008), to consider the experiences undergraduate researchers have of 'trying to gain access' to the research community.

At the outset, *Reinvention* aimed to avoid the fate of most other undergraduate journals that 'fall by the wayside due to a lack of submissions, or support from faculty members'. Since there was 'no convincing explanation, however, as to why an undergraduate research journal should be doomed to failure or obscurity', the journal has indeed been an experiment (Metcalf, 2007, editorial):

The team itself is unique in that it reflects true collaboration between students, academics, and administrative and technical staff. Students and academics will, for example, work together as Subject Editors to elicit submissions and coordinate peer review within each individual Faculty and School.

The first challenge to *Reinvention*, one of status, had been raised in the prior literature, 'a question of quality control that might worry others about citing the article or using the data in their own research' (Gilbert, 2004, pp 22-23). *Reinvention* has aimed for high status by using the double-blind peer-review method used by traditional journals. Of course, this means many papers are rejected, as with a traditional journal, which provokes a second question about inclusivity.

Observers have 'raised the question of whether the journal exists to support an elite group of undergraduates or to provide an inclusive medium of knowledge development and sharing' (Lambert et al, 2008). The journal's peer review model, rigorous to ensure status, is however unusual: 'Reviewers are invited to provide more support to authors than might be required by a traditional academic journal'. Even if their work is not published, students may benefit from valuable 'collaboration' with their peer reviewers, though the nature of this relationship is itself problematic, our next point.

Issues with peer review were highlighted by one potential reviewer who declined to read a paper on the grounds that the academic in question did not consider undergraduates 'peers'. This is an example of the issues that arise when students try to 'gain access' (Case, 2008) to an academic community, confounding initiatives in student engagement. *Reinvention* takes the position that its 'authors are researchers first and foremost, notwithstanding their substantive status as undergraduates' and that the term 'peer review' is therefore as valid. It should be said that academic peer reviewers are overwhelmingly supportive of the process, while raising interesting questions about 'how high to set the bar'.

The question as to whether there should be any 'leeway' in what is publishable research from an undergraduate, as compared with an academic, is key. Reviewers have raised issues around, for example, scale and originality of studies, which come back ultimately to resources. As well as limited time in, or alongside, the rest of the curriculum, undergraduates have little access to, for example, travel money to access original documents or prolonged periods in professional laboratories, often readily available to postgraduate and academic researchers. Indeed, while we have identified a number of cultural issues around the engagement of undergraduate researchers with the research community, it may be this lack of resources that is felt most keenly.



## Conclusion

The research presented in this paper shows that the 'student as consumer' label fails in many respects to describe the complex motivations that students have with respect to the HE institutions. Indeed, given the opportunity, some students decide to undertake and publish their own research, to participate in curriculum and policy development, and to spend time encouraging other students to do the same.

Meaningful student engagement of this kind challenges models of HE that emphasise binaries between research and teaching and between staff and students. Student researchers as producers of original knowledge and designers of curriculum raise important questions about the status of participants in HE and the resources allocated to their interests. Such questions lead in turn to broader debates about the role of the contemporary university.

## References

Apple, M (1993) *Official Knowledge*, New York: Routledge

Case, J M (2008) Alienation and engagement: development of an alternative theoretical framework for understanding student learning, *Higher Education*, vol 55, no 3, pp 331-332

DIUS (2008) The debate on the future of higher education, available at: [www.bis.gov.uk/policies/higher-education-debate](http://www.bis.gov.uk/policies/higher-education-debate) (accessed 20 November 2009)

Gilbert, S F (2004) Should students be encouraged to publish their research in student-run publications? A case against undergraduate-only journal publications, *Cell Biology Education*, vol 3(1), pp 22-23

Gibson, C, Hanley, C, Metcalfe, D and Lambert, C (2008) Editorial: Reinvention One Year On, *Reinvention: a Journal of Undergraduate Research*, vol 1, issue 2, available at: [www2.warwick.ac.uk/go/reinventionjournal/issues/volume1issue2/Editorial](http://www2.warwick.ac.uk/go/reinventionjournal/issues/volume1issue2/Editorial) (accessed 20 November 2009)

Lambert, C (2009) Pedagogies of participation in higher education: a case for research-based learning, *Pedagogy, Culture & Society*, vol 17, p 295

Lambert, C, Parker, A and Neary, M (2007) Teaching entrepreneurialism and critical pedagogy: Reinventing the higher education curriculum, *Teaching in Higher Education*, vol 12, pp 525-36

Little, B, Locke, W, Scesa, A and Williams, R (2009) Report to HEFCE on student engagement, London: Centre for Higher Education Research and Information, Open University

Lambert, C and Metcalfe, D (2009) Editorial: The Importance of Great Expectations, *Reinvention: a Journal of Undergraduate Research*, vol 2, issue 1, available at: [www2.warwick.ac.uk/go/reinventionjournal/issues/volume2issue1/Editorial](http://www2.warwick.ac.uk/go/reinventionjournal/issues/volume2issue1/Editorial) (accessed 20 November 2009)

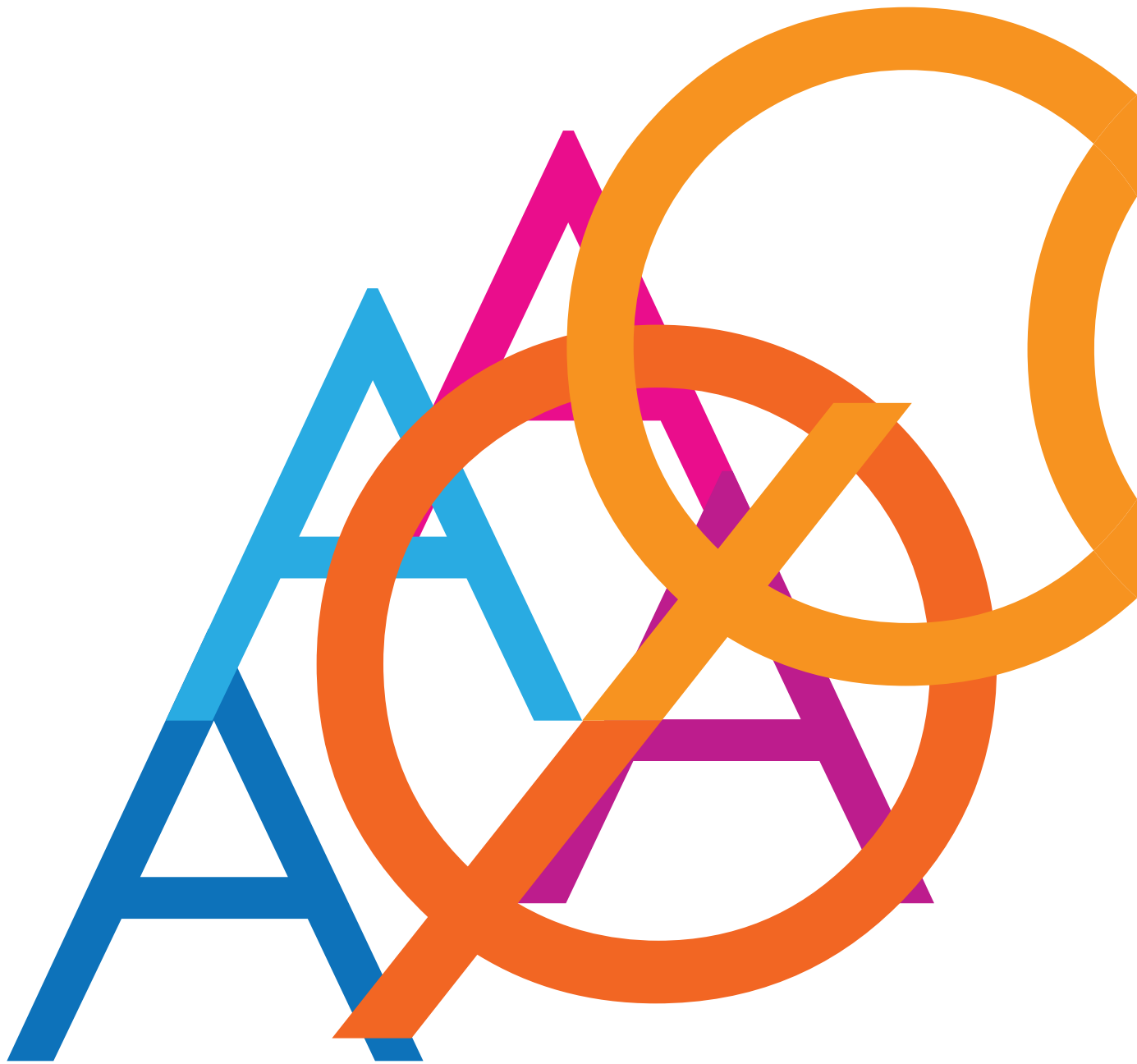
Mandelson, P (2009) Speech at the CBI Higher Education Summit, London. See <http://news.bbc.co.uk/1/hi/education/8316658.stm> (accessed 20 November 2009)

Mann, S J (2001) Alternative perspectives on the student experience: Alienation and engagement, *Studies in Higher Education*, vol 26, pp 7-19

Margolis, E, Soldatenko, M, Acker, S and Gair, M (2001) Peekaboo: hiding and outing the curriculum, in Margolis, E (ed) (2001) *The hidden curriculum in higher education*, pp 1-20, New York: Routledge

McCulloch, A (2009) The student as co-producer: learning from public administration about the student-university relationship, *Studies in Higher Education*, vol 34, pp 171-183

- McMillan, J and Cheney, G (1996) The student as consumer: The implications and limitations of a metaphor, *Communication Education*, vol 45, pp 1-15
- Metcalfe, D (2007) The Launch of an Undergraduate Research Journal, *Reinvention: a Journal of Undergraduate Research*, launch issue, available at: [www.warwick.ac.uk/go/reinventionjournal/pastissues/launchissue/editorial](http://www.warwick.ac.uk/go/reinventionjournal/pastissues/launchissue/editorial) (accessed 20 November 2009)
- Metcalfe, D (2008) Reinventing the Journal?, *Reinvention: a Journal of Undergraduate Research*, vol 1, issue 1, available at: [www2.warwick.ac.uk/go/reinventionjournal/volume1issue1/metcalfe](http://www2.warwick.ac.uk/go/reinventionjournal/volume1issue1/metcalfe) (accessed 20 November 2009)
- Metcalfe, D (2009) Editorial: Change and Continuity, *Reinvention: a Journal of Undergraduate Research*, vol 2, issue 2, available at: [www.warwick.ac.uk/go/reinventionjournal/issues/volume2issue2/editorial](http://www.warwick.ac.uk/go/reinventionjournal/issues/volume2issue2/editorial) (accessed 20 November 2009)
- Mockridge et al (2009) The Graduate Pledge: King's College - Warwick Project, The Reinvention Centre for Undergraduate Research, The University of Warwick
- Neary, M and Winn, J (2009) The student as producer: reinventing the student experience in higher education, in Neary, M, Stevenson, H and Bell, L (ed) *The future of higher education: Pedagogy, policy and the student experience*, pp 126-38, London: Continuum
- Obama, B (2009) Remarks made at the National Academy of Sciences Annual Meeting, Washington DC, 27 April 2009
- Ramsden, P (2008) *The Future of Higher Education Teaching and the Student Experience*, available at: [www.dius.gov.uk/higher\\_education/shape\\_and\\_structure/he\\_debate/~/\\_media/publications/T/teaching\\_and\\_student\\_experience\\_131008](http://www.dius.gov.uk/higher_education/shape_and_structure/he_debate/~/_media/publications/T/teaching_and_student_experience_131008) (accessed 20 November 2009)
- The Quality Assurance Agency for Higher Education (QAA) (2004) *Code of practice for the assurance of academic quality and standards in higher education*, available at: [www.qaa.ac.uk/academicinfrastructure/codeOfPractice](http://www.qaa.ac.uk/academicinfrastructure/codeOfPractice) (accessed 20 November 2009)
- The Reinvention Centre for Undergraduate Research (2007) The Reinvention Centre for Undergraduate Research two year evaluation, available at: [www.warwick.ac.uk/go/reinvention/evaluation](http://www.warwick.ac.uk/go/reinvention/evaluation) (accessed 20 November 2009)
- Thrift, N (2008) *Research careers in the UK: a review*, available at: [www.dius.gov.uk/higher\\_education/shape\\_and\\_structure/he\\_debate/research\\_careers](http://www.dius.gov.uk/higher_education/shape_and_structure/he_debate/research_careers) (accessed 20 November 2009)
- UUK event (2009) Student engagement and partnership: shaping the learning experience, Universities UK, Woburn House, London, February 2009



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