PRACTICE PAPER

Linking research, teaching and learning within the discipline: Evaluating student learning through "real life" research in sports development

Linda Allin (linda.allin@northumbria.ac.uk)
Division of Sport Sciences, Northumbria University, Northumberland Building,
Newcastle upon Tyne, NE1 8ST, UK

Abstract

The ways in which links between research and teaching are embedded within the curriculum and related to student learning are influenced by the discipline context (Griffiths, 2004; Healey, 2005a; Jenkins, 2000). The current paper evaluates how involving students as researchers impacted on their learning within a community sports development module. The paper shows how experience of "real life" evaluation can develop student research skills, develop their industry contacts, and prepare them to problem-solve as graduates in a complex and uncertain society (Barnett, 2000; Scott, 2002). Difficulties and obstacles to learning are also presented.

Keywords: research-teaching links; sports development; learning

Introduction and background

Excellence in research and in teaching are critical for higher education in a modern society, where graduates need to be able to generate new knowledge, and also to operate within a changing world with its inherent risks and uncertainties (Scott, 2002). However, the nature of the relationship between research and teaching in universities remains an area of considerable controversy. Intuitively, academics may feel that being actively involved in both research and teaching should be mutually beneficial, but the evidence to support this has been far harder to demonstrate. As Brew and Boud (1995, p. 261) identified, "it is not that the results are conflicting, but they are inconclusive". A meta-analysis by Hattie and Marsh (1996) provided arguments in support of a positive, negative and ultimately zero relationship between research and teaching. Results were confounded by problems in defining research and teaching, the way they are often conceptualised as separate entities, and the presence of mediating variables. In particular, statistical approaches correlating measures of research output with student evaluations of teaching effectiveness produced an overall zero relationship. Correlations, of course, are problematic, and Robertson and Blackler (2006) criticised such studies for failing to recognise the complexities of the activities of research and of teaching, as well as taking a reductionist approach to any relationship between them.

Linda is a Principal Lecturer in sports development and Director of Quality Enhancement in the Division of Sport Sciences at Northumbria University. She is also a university Teaching Fellow and associate of the Northumbria Centre for Excellence in Teaching and Learning (Assessment for Learning). She has undertaken and evaluated a range of pedagogic research and development projects designed to develop the quality of student learning within the sport programmes.

In order to progress arguments about research and teaching links, authors such as Boyer (1990), Brew (2003) and Healey (2005a), sought to re-focus the debate towards ways in which research and teaching may be integrated and, most importantly, the ways such links can benefit student learning. Healey's (2005b) framework model for the research-teaching nexus provided one way of analysing how research-teaching links can be made within the curriculum. Within this framework, Healey (2005b) suggested the curriculum may be designed according to whether students are participants or an audience for research, and the extent to which the emphasis is on research content, or research process. Different forms of integration may be evident across a university curriculum, and quadrants are not mutually exclusive. The quadrant from Healey's model most relevant for this paper is that entitled "research based learning", which emphasises student involvement as researchers. As Brew (1999) argued, it may be when academics or researchers see their activities as parallel to the experiences of students as inquiry based learners, and facilitate student involvement in research-like processes, that the impact of research on effective learning can be facilitated. Jenkins (2000) further suggested that in order to facilitate learning, "as teachers we need to move radically away from the traditional lecture and forms of assessments to methods that mirror the research processes (in our discipline)" (p. 333). This paper explores one way of developing learning through taking a student-centred approach and engaging students in active participation in evaluation research processes within the context of sports development.

Linking research, teaching and learning in sports development

The importance of the discipline context has been recognised by authors such as Jenkins (2000), who argued this based on the different nature of knowledge construction that exist across disciplines, the different research methods used and their different communities of practice (Lave & Wenger, 2001). There are a number of publications that explore research-teaching nexus within the subject areas of geography and the environment (e.g., Griffiths, 2004; Healey, 2005a; Hill, Woodland, & Spalding, 2004; Jenkins, 2000). Healey pointed to the multi- and inter-disciplinary nature of geography and the different research methods and paradigms used. For example, he cited the way in which geography lies at the "intersection between the natural and physical sciences, the social sciences, and the arts", covering the range of "soft, hard, pure and applied" discipline types (p. 186). Healey suggested that "few other disciplines can provide this degree of inter-disciplinarity" (p. 187). A similar proposal can be made within the area of sport. That is, if one considers the range; across pure and applied sport sciences, sports development, sport management, outdoor and sports coaching (which some might identify as both science and art!); then sport departments can also cover this discipline range. Moreover, the research skills most used within these areas will vary considerably.

In the current paper, the benefits to learning derived from a specific and explicit focus on developing the teaching and research nexus within the context of sports development are examined. For sports development, a highly vocational subject area, research skills need to be applied. They can cover both quantitative and qualitative methodologies, but are usually distinguished from the experimental approaches that are central to much work in pure sport science. The BA (Hons) Sports Development with Coaching degree at Northumbria University has a key aim to bring together theory and practice. Within the degree there is a core strand of research methods modules, which run from a year long module in the first year, through a compulsory year long module in second year, culminating in a final year dissertation. The second year research methods module focuses on research design and analysis. A programme audit showed that research and teaching links were made within other modules through, for example, staff using their own research papers in modules; students engaging with research and study skills, tasks or research papers; and requiring students to use observational research tools in sports coaching. However, in reviewing the research and teaching curriculum in sports development, it was felt that there were insufficient opportunities for students to engage in research of a practical nature which was seen by students as relevant to sports development industry. Providing such opportunities

within the main sports development subject area would extend student involvement in research beyond a research methods strand which catered for different sports degrees within the department. By integrating student engagement with research into the specific discipline context of sports development, it was felt that they would be able to experience relevant vocational research, and gain research skills and learning relevant to the sports development industry.

Developing research teaching links at module level

In a community sports development module in the second year of their study, students were asked to evaluate the role of community sports development in addressing a wider social agenda. To answer this, students had previously written an assessed essay. However, research into teaching and learning has long identified that students can take different approaches to learning: a surface approach, focusing on getting the task completed with least effort, and a deep approach, involving developing understanding, meaning-making and interpretation (see Marton & Saljo, 1976, as cited in Biggs & Tang, 2007). Biggs and Tang (2007) also explained how student approaches to learning are influenced by the learning activities they are asked to engage in. Within this module, tutors felt that involving students as researchers evaluating community projects with sports organisations was one of the more complex learning tasks that was closer to the reality of sports development practice and had the potential for enhancing student engagement in deep learning. Tutors also perceived additional potential benefits for students in developing research skills relevant for working in community sports development and in enhancing their employability, through increasing their knowledge of, and work with, community sports development organisations. Building "real life" evaluation research into the sports development curriculum, albeit in a limited form, further resonated with Webster (2002), who indicated that vocational subjects have a "natural fluidity at the boundaries of teaching and research between doing, discovering, learning and disseminating" (p. 15) and moreover, that in such subjects there is a need to realign research with industry with a challenge to "create a coherent curriculum and learning experience that both educates and trains" (p. 16). In order to do this, employer support for the process was sought.

The Community Sports Development module was taught on campus through lecture, seminar and workshop activities. Early lectures were used to impart theoretical knowledge of community sports development whilst seminars and workshops involved active discussions, debates, presentations and tasks. These aimed to engage students further with the subject matter and foster an active learning approach. For example, in one seminar, students were asked to participate in a role play to develop school-club links and take different partner perspectives to help learn about partnership working. In another, students used research evidence gathered from the "Value of Sport Monitor" from Sport England (2010) to take either side of a debate on the value of sport. In another, students were asked to work in groups to create an imagined community sports development scheme which aimed to address crime and youth disorder. Students then presented and justified their scheme to other groups who provided feedback and identified any potential issues based on their readings. Key government policies and initiatives relating to themes such as social inclusion, community health, community safety or school-community links were incorporated. These topics were also possible foci for student evaluation projects.

Prior to the module beginning, and throughout the first 4 weeks of the module, the author contacted and visited key employers in the region in order to identify relevant contacts for potential projects or sporting programmes relevant to these community issues. From them, seven potential projects relating to the use of sport to address the government agendas above were identified. Colleagues from schools in the local area were also identified by students or tutors as contacts for students to evaluate school-community links. Students who did not wish to follow these up could follow up their own contacts made through previous coaching or sports development work. Students were then asked to work in groups of three to follow up on these contacts and negotiate with them to undertake a small-scale evaluation of one project or community sports development programme. The evaluation was to comprise the equivalent of four half-hour interviews; all interviews, a combination of one to

one interviews and focus group interviews, or a questionnaire plus interviews; depending on the nature of the programme and their discussions with the organisational contact. Tutors emphasised that each student group therefore had to actively work with their organisational contact to identify specific projects and research questions. Students were then required to present their proposed evaluation project to the rest of the class for an initial summative assessment comprising 20% of the module mark, this assessment then also played a formative role in the development of the evaluation research project through peer and tutor feedback. Subsequent to the presentation, students negotiated interviews with participants, completed ethics forms and processes, undertook the data collection and then wrote up their data into an evaluation project which formed the final 80% summative assessment for the module. An evaluation research project assessment was deemed to be an "authentic" assessment task (here, one which resembled the type of complex task which they may need to be able to do as sports development workers), and relevant to students' future employability within the field. This was based on staff background research which indicated that there is an increasing emphasis on accountability for government spending on sport and an increasing number of references to evaluation projects within sports development and physical activity publications (see Coalter, 2008; Hylton & Bramham, 2008; Hylton, Long & Flintoff, 2005). Tutorial support was available for students to discuss their developing projects and their understandings in relation to the task and their organisations.

Evaluating student learning

Twenty one students, comprising just over 40% of the module cohort, completed a separate evaluation questionnaire designed to reveal their views and experiences of the research-teaching nexus within the module, specifically their involvement in the real life evaluation research. These students were those who attended the final module evaluation session and, although attendance was higher than for many modules, in interpreting the findings it should be recognised that they may have been the students who were most engaged with the module. The questionnaire consisted of some background questions followed by three open-ended questions exploring what students felt they had learned, what helped their learning and what they found difficult or problematic. These questions were designed to encourage students to think about the learning process they had engaged in, rather than the teaching of the module. There then followed a set of five rating scale questions asking students to what extent undertaking this research had helped them to (a) develop research skills, (b) develop their employability, (c) prepare for dissertation, (d) develop their contacts in the community and (e) prepare them for the realities of field research. Whilst some of these questions overlapped, it was felt that each emphasised slightly different aspects of the areas of interest for students. A final question asked students in what ways they were aware of how research had been integrated into the module. In addition to the questionnaire distributed by the module tutor, the module was evaluated by a researcher from the Centre for Excellence in Teaching and Learning (CETL), who engaged seven students in a focus group where they could discuss their learning without the presence of the module tutors. Key focus group questions relating to this paper were:

- What is distinctive about this module?
- How did the "real" context help you to learn?
- How do you feel about doing real life evaluation research with organisations?
- What research skills do you feel you learned (if any)?
- How do you feel about doing research/collecting data as part of your assessment?

This focus group lasted over an hour in length and produced rich, detailed responses from the students. The verbatim transcript produced 22 pages of text (over 13,000 words) and was read through several times in order to better interpret student comments relating to their learning. Quotes which related to similar themes were then grouped together to form main areas which seemed to represent student views on the impact of their real life research experiences in the module. These were developing a more complex understanding, developing research skills, and developing contacts and employability. Further readings of the transcripts established an additional theme that highlighted the importance of

organisation and tutor support for helping student learning. Issues with group-work also emerged as a problem for students.

Results and discussion

Developing insight and understanding of community sports development

Students responded that they found researching in the community had developed their insights into the subject area. Whilst development of subject knowledge might be expected, in response to the question of how the real context had helped them learn, several students commented that the real life element differed from learning in the classroom in enabling them to create their own meanings and understandings of community sports development. As one student put it:

> You've got all your theory-based knowledge from your lectures and things, you can actually apply that to the real world, but then you can draw on that real world experience in other theories, you can make it into something rather than a textbook in front of you.

For this student it was the "making of it into something" that was key. Other students provided examples of their learning through the real life experience as below:

> [I learned] what an impact community sports development has in the North East.

> [It is] interesting to see how many viewpoints there are and within one club, the issues faced in making a programme work, and how participation and locality work.

> I am more aware of programmes that are running and why they are taking place.

> A good insight into the field and how difficult it is to put policy into practice.

> Not everything said actually gets done – there are a lot of contradictions and tensions that arise.

The importance of student-led rather than tutor-led research was also evident through the independent focus group discussions, where the difference in learning between students as audience and students as active participants was highlighted by one student:

> If you just get given something, then you, well you read it but maybe you might be tired or bored and you read it and you don't really read what's happened and maybe you can't imagine how they've been out and done it. When you've actually got to go out and do it, it gives you a better understanding of what you're doing because you know the ins and outs [*sic*] of it and you know exactly what you've asked, the process that has been there to answer it and the results that you've got from it, instead of just being given a piece of paper in black and white saying "we did this, this and this and this is what happened".

The findings suggest that an active process of enquiry, from the identification of appropriate research questions to gathering and analysing responses from the field, helped these students to construct their own knowledge about community sports development in a way which had meaning and relevance to them. They were appearing to take some ownership of the problem, and taking the first steps to becoming legitimate practitioners, arguably both in relation to developing identities as researchers, but also as sports development workers. These students seemed to be more aware of the tensions and issues within sports development and the different perspectives; something which they had read about, but which only became real through discussions with those in the field.

Developing research skills and encountering uncertainty

In addition to developing a deeper understanding of the impact of community sports development and its inherent tensions and contradictions, students also identified learning in relation to research skills. On a rating of 1 (*strongly disagree*) to 5 (*strongly agree*), the mean rating was 4.14 (SD = 0.65), suggesting that students perceived the process had developed their research skills. Particular areas commented on within the questionnaire included interviewing technique and skills, skills in the research process, and organisational skills. As such, students were developing both specific techniques of formal research, and also more transferable research skills such as communication and organisation skills.

Perhaps significantly, a key comment from several students in relation to their learning of research skills was the realisation that "not everything runs smoothly, however well organised you are". This final comment was supported in the responses to the closed questions, where the mean rating relating to students learning the reality of research was highest at 4.24 (SD = 0.62). Students in this case had now internalised the message by Arksey and Knight (1999) in relation to research design where they highlighted to readers to "not assume that your study will proceed as you imagined" (p. 71). Having to adapt the research process throughout the project as it developed was also brought out by students in the focus group interviews.

> Student: It may not always go how you plan it to. If you're just given results and told "there you go, evaluate them" then you've got your assessment criteria and you've got your results so there's going to be a general outcome. We're going out and doing this and we might be going out looking for one result and there might be something completely different happen and we've got to change our whole focus, because it is real and you can't predict what's going to happen. You've got to change everything to go with what you're given or what you get from your interviews.

> Interviewer: Yes. That's real research as well though, that's what really happens in research! (Laughter).

> Student: But this being our first experience of it, we're not used to it, we don't know what's going to happen, we don't know what could happen.

One of the key reasons for developing research-teaching links within universities is based on the need for graduates to be able to deal with an increasingly complex and uncertain world (Scott, 2002). Moreover, according to Barnett (2000, p. 125), "for the students to have space and make their own interventions and to make their own offerings, their lectures have, to a significant degree, to fade into the background". All too often, research is presented to students as neatly packaged and as a straightforward process. In this module, the tutors "stepped aside" so that students were required to engage with and respond to the uncertainties they encountered, though tutors were always available to support and encourage the students in relation to their achievements. The comments from these students suggest that, although finding it daunting, they were both realising the "messiness" of real life research, and also gaining valuable skills in dealing with unpredictability that they would be able to transfer to future situations.

These students were also able to identify that their learning would help prepare them for their future dissertation work in the third year and this finding was echoed in the closed question responses to that question (mean response = 4.12, SD = 0.92). This may be associated with student perceptions of learning specific research skills and how these skills related to the technical demands of a dissertation. However, the extent to which students may have made links between these two aspects was not explored. It is also arguable that students' learning in relation to problem-solving and adapting to change may go far beyond the dissertation and academic work, and into industry.

Developing contacts and employability

Some students commented that their learning included developing contacts within the sports development industry. The mean rating within the questionnaire for the extent to which the real life evaluation research had helped with "employability" and "making contacts in the area" was 3.61 (SD = 0.97) and 3.66 (SD = 1.06) respectively, suggesting that for students, although positive on average, benefits were not as strong as those related to "research skills", "dissertation" and the "reality of research". Comments from the questionnaire included "making links in sport is crucial" though it is not clear whether this student was referring to having made links, or recognising the significance of partnership working within sports development. Within the focus group, one student identified:

> I think it's been useful though because the people that you've been interviewing and making contact with, they're useful contacts then and they could possibly be there to call on later, whether it be in your dissertation or some other thing that you may need and they are happy to be involved again.

Sports development is an area of employment where jobs are often obtained through informal networks and experience in the industry is viewed as an essential criterion for graduate level positions. Indeed, two students gained their subsequent work placement experiences through contacts made within this module, with a view to being offered potential part-time work continuing through their final year and potentially through to longer term employment. Several employers also informally indicated to the tutor that they were happy to help students build-up contacts because it would give them some practical knowledge and experience, which would help them in gaining employment later on. Some of the employers contacted were also previous students from the degree course, who therefore had an understanding both of the academic environment and of the need for vocational experience. This process of linking students with previous graduates may also help students in the enculturation process of becoming a sports development worker (see Lave & Wenger, 2001).

Organisational and tutor support

Students identified the key role of the organisation as one factor supporting their learning, notably through the organisation facilitating their project work. Five students suggested that help from the organisation in terms of organisational knowledge, the co-operation of the organisation and the ability to interview key people in the field, were helpful. Organisational support was perhaps also instrumental in another student commenting that, "I was able to fully understand what I was trying to find out and evaluate in more depth" and another who identified "the vocational experience" in general as helping their learning. In contrast, one student commented that for their project it was "difficult to get [the] organisation interested in what you are trying to evaluate". This may have impacted negatively on the students' learning in that if the organisation was perceived as being uninterested in the research, the student might have been less likely to perceive the research as being authentic or having value. Having good prior communication with organisations is therefore important to ensure that they understand fully the role they are being asked to play in facilitating the student evaluation research.

In addition to organisational support, tutor support, plus the work in lectures, seminars and background research of past projects were also identified as factors helping learning, before "going to the organisation and meeting those that use it and require it". That is, the work put in by students in understanding the context of research and previous research in the area, was perceived as useful. In this module, tutor support in particular was accessed in relation to student group work and in supporting students accessing interviewees. Tutors were hoping to enable students to undertake the more complex problems, which they were experiencing for the first time. However, it was evident that this module was particularly time-consuming for tutors and the sustainability of this support would need careful consideration as module numbers continued to grow.

Difficulties and obstacles to learning

By far the biggest difficulty students encountered in undertaking their evaluation research related to time and time management. This was mostly associated with students being able to access participants and negotiate interviews outside the university at times when both student and project leader or participants in the community sports development programme were available. These difficulties were expressed by students in different ways, including "planning", "time management", "organising and finding a time and place suitable for everyone", "gaining the access time with participants", "people are very busy" and "time commitment for both parties".

Students and tutors noted that engaging students in real life research involved greater time issues, and that there was a need to be as flexible as possible within the constraints of the module. Several students required extensions to the module submission date due to circumstances outside of their control. Part of learning about the research process involved conveying to students the need to be organised in advance, and this was incorporated into lectures and seminars. However, it was typically the experiential learning through the research process in the latter weeks that highlighted to students the old adage "things always take longer than you think!" In two cases, project leaders who had been willing to be interviewed were contacted again for the student to find that they were on leave or, in one case, on honeymoon! Gaining access to interview participants within organisations is highlighted as a key challenge in qualitative research (Arksey & Knight, 1999) and one which students were able to meet in this practice environment, prior to their dissertation or any future needs.

A further challenge students experienced was related to working in groups to undertake the research. Whilst most groups (of three or four persons) flourished, other groups had issues where one participant was not perceived as contributing. Whilst working in groups can be a good strategy to enable peer support and collaborative learning, it was problematic in this context when the research data was not collected or distributed evenly. Although it can be argued that group work is also a feature of real life work, tutor support is particularly needed when research groups do not function well to ensure that the evaluation work can take place successfully and help foster a positive learning experience.

Awareness of research-teaching links

The final question in the questionnaire asked students to identify research-teaching links they were aware of and how research was embedded within the module. However, few students were able to articulate these links, with only a few students citing examples as the "guest speaker" (who delivered a session based on the current evaluation research projects which were being undertaken within the local authority), plus "reading research articles and papers". This finding from students was significant, as the question was deliberately focused on student awareness of research-teaching links, without prompting with examples of what might be considered such links. Moreover, from a staff perspective, the module had integrated research-led teaching as well as research-based teaching throughout via (a) staff presentations of their own evaluation research consultancy project, (b) explicit reference to the tutors' involvement in a piece of research with sports development employers and (c) lectures on the evaluation research process with case studies in sports development. The lack of awareness by students suggests that research-teaching links are not automatically made by students, something which needs to be borne in mind when exploring student experiences. The finding also supports the argument of this paper, which is that the focus for research in the area of research-teaching linkages should be less on the nature of such links, and more on what such links achieve for student learning.

Conclusion

Linking research and teaching by embedding real life evaluation research into the sports development curriculum was seen by students and module tutors to be a valuable learning experience. For students who took part in this evaluation, what seemed particularly valuable to them was developing understanding of the complexities and realities of research "in the

field", which would both enable them to be better prepared for subsequent research work, but also developed valuable problem-solving skills relevant for their future careers. Making links to the value of research and research skills in the context of students' disciplines seemed to engage students in the process and the module.

Whilst the module was staff intensive in terms of support and there were issues with group work, these students were much more prepared both for their dissertation research projects which followed and for working in their field of sports development once they graduate. The findings of this evaluation need to remain contextualised in terms of those who completed the process and study. Nevertheless, the paper highlights some of the potential benefits to learning of engaging students in real life evaluation research, together with some of the potential issues that can be faced.

References

Arksey, H., & Knight, P. (1999). *Interviewing for social scientists*. London: Sage

Barnett, R. (2000). Reconfiguring the university. In P. Scott (Ed.), *Higher education re-formed* (pp. 114-131). London: Falmer Press.

Biggs, J., & Tang, C. (2007). *Teaching for quality learning at university* (3rd ed.). Maidenhead, England: Open University Press.

Boyer, E. (1990). *Scholarship reconsidered: Priorities of the professoriate*. Princeton, NJ: Carnegie Foundation for the Advancement of Teaching.

Brew, A. (1999). Research and teaching: Changing relationships in a changing context. *Studies in Higher Education, 24*, 291–300. doi:10.1080/03075079912331379905

Brew, A. (2003). Teaching and research: New relationships and their implications for inquiry-based teaching and learning in higher education. *Higher Education Research & Development, 22*, 3-18. doi:10.1080/0729436032000056571

Brew, A., & Boud, D. (1995). Teaching and research: Establishing the vital link with learning. *Higher Education, 29*, 261–273. doi:10.1007/BF01384493

Coalter, F. (2008). *A wider social role for sport: Who's keeping score?* London: Routledge.

Griffiths, R. (2004). Knowledge production and the research-teaching nexus: The case of the built environment disciplines. *Studies in Higher Education, 29*, 709–726. doi:10.1080/0307507042000287212

Hattie, J., & Marsh, H. W. (1996). The relationship between research and teaching: A meta-analysis. *Review of Educational Research, 66*, 507–542.

Healey, M. (2005a). Linking research and teaching to benefit student learning. *Journal of Geography in Higher Education, 29*, 183–201. doi:10.1080/03098260500130387

Healey, M. (2005b). Linking research and teaching exploring disciplinary spaces and the role of inquiry-based learning. In R. Barnett (Ed.), *Reshaping the university: New relationships between research, scholarship and teaching* (pp. 30–42). Maidenhead, England: SRHE & Open University Press.

Hill, J., Woodland, W., & Spalding, R. (2004). Linking teaching and research in an undergraduate fieldwork module: A case study. *Planet, 13*, 4-7.

Hylton, K., & Bramham, P. (2008). *Sport development: Policy, process, practice*. Abingdon, England: Routledge.

Hylton, K., Long, J., & Flintoff, A. (Eds.). (2005). *Evaluating sport and active leisure for young people.* Eastbourne, England: Leisure Studies Association.

Jenkins, A. (2000). The relationship between teaching and research: Where does geography stand and deliver? *Journal of Geography in Higher Education, 24*, 325-351. doi:10.1080/713677414

Lave, J., & Wenger, E. (2001). *Situated learning: Legitimate peripheral participation*. Cambridge, England: Cambridge University Press.

Robertson, J., & Blackler, G. (2006). Students' experiences of learning in a research environment. *Higher Education Research & Development, 25*, 215–229. doi:10.1080/07294360600792889

Scott, P. (2002). Let's stop trying to separate the inseparable. *Exchange: Linking Teaching and Research, 3*, 27–28. Retrieved May 8, 2009, from http://www.exchange.ac.uk/archive.asp

Sport England (2010). *The Value of Sport monitor*. Retrieved April 12, 2010, from http://www.sportengland.org/research/value_of_sport_monitor.aspx

Webster, C. (2002). Constructing the teaching–research link in the built environment disciplines. *Exchange, 3*, 15–16. Retrieved May 8, 2009, from http://www.exchange.ac.uk/archive.asp