



Resource Guide Linking Teaching and Research

Introduction

This guide was produced as part of a national LTSN Generic Centre project which involved seven subject centres, including Hospitality, Leisure, Sport and Tourism (HLST), in investigating the link between teaching and research within disciplines. The project website <http://www.heacademy.ac.uk/850.htm> provides further links to an extensive range of resources and activities undertaken within the project. To find out more about the HLST project activities, see www.hlst.heacademy.ac.uk/projects/linktr.html.

If you know of resources which provide a subject specific insight into linking teaching and research within hospitality, leisure, sport or tourism, or you are able to provide a case study which demonstrates the link, please contact Nina Becket (njbecket@brookes.ac.uk).

The Subjects

Research in HLST has been developing rapidly alongside the maturing of the cognate areas as academic subjects at university level. The QAA's Subject Overview Report summary states that:

"Curricula are multidisciplinary, flexible and coherent, with impressive links to industry and the professions. The strong external influences are a pervasive feature of the design, content and delivery of programmes. The interrelationship between theory and practice is a consistently strong feature, but there is a general need to strengthen staff research and scholarly activity in support of the subjects."
(www.qaa.ac.uk/reviews/reports/subjectlevel/qo3_01_textonly.htm#review , p1)

In relation to teaching, learning and assessment, the report states that successful initiatives are in place; for example, industry-supported consultancy projects and the use of realistic work environments, such as laboratory-based scientific testing in sport-related areas. However, it is also concluded that "in some 15% of reviews, student learning is insufficiently challenging" (p4).

In order to consider the engagement of students with research within HLST, a focus group meeting was convened. This indicated that key aspects for consideration were; the availability of accessible and credible resources, assessment, inquiry based learning, approaches to learning, research skills, awareness of research undertaken by academics, student lifestyle, and the structure of the academic year (discussion summary www.hlst.heacademy.ac.uk/resources/linking_summary.pdf).

As part of this project, the perspectives of both HLST students and staff regarding the teaching/consultancy/research nexus were investigated:

Fiona Jordan researched the views of students at the University of Gloucestershire. The findings of her work suggest that these students perceive that there are significant benefits which result from the involvement of their academic staff in research and consultancy. From the student perspective, the key to managing the nexus appears to lie in the adoption of a broad definition of research and consultancy within departments, and the active incorporation of staff research and consultancy activities within the curriculum. For a detailed case study report see www.hlst.heacademy.ac.uk/resources/linking_glos.pdf .

David Botterill at the University of Wales Institute, Cardiff (UWIC) investigated the views of staff regarding the nexus. Staff at UWIC thought that a key issue was whether linking teaching with research was concerned with using substantive research-based knowledge within teaching, or about students becoming researchers and sharing in the creation of knowledge process themselves. It was suggested that both perspectives were valid and that there was an implicit complementarity between knowledge creation (research) and knowledge dissemination (teaching). For a detailed case study report see www.hlst.heacademy.ac.uk/projects/linking_staff.pdf .

An essay reviewing the work undertaken during the project and providing an overview of the links made between teaching and research in the subjects is available at www.hlst.heacademy.ac.uk/resources/linking_review_essay.pdf .

Teaching and Research

Research and teaching are the two principal activities in universities. However, they are often seen as separate. The links between the two have been increasingly discussed internationally within higher education. The aim of this guide is to consider the various dimensions that this aspect of academic work offers. A number of universities in the UK, Australia and the United States, notably those that claim to be research-led institutions, have given attention to how to ensure that these links are made and incorporated into both undergraduate and postgraduate courses. Linking teaching and research goes beyond involving students in research activities, or exposing them to the research of their tutors, in its most comprehensive dimension it offers many new opportunities for curriculum development.

In the light of the emphases within current higher education agendas that include lifelong learning, employability skills and research capacity, linking teaching and research is also attracting the attention of higher education funding councils in the UK. For example, a HEFCE Council Briefing stated that "teaching benefits from research and scholarly activities; conversely teaching contributes to the development of research. To exploit this synergy, the relationship between teaching and research needs to be actively managed." (www.hefce.ac.uk/pubs/hefce/2000/00_37.htm, 2000, p4). The Department for Education and Skills commissioned a '[Review of the Academic Evidence on the Relationship Between Teaching and Research in Higher Education](#)'. This concludes that 'The evidence indicates the relationship may be modestly positive, though it is likely to be stronger at postgraduate than undergraduate levels'. As a result, further research is recommended. Despite the argument for a close, positive relationship between the two, research suggests that the relationship is problematic, and the link does not occur automatically - it has to be created, planned and structured in a systematic way; for an extensive bibliography, see www.brookes.ac.uk/schools/planning/LTRC/guidelines/references.htm.

Further, universities are dealing with larger numbers of students, arguably with less resources. In this situation, new modes of learning, delivery and assessment will be needed in order to meet the needs of students, staff, institutions and current agendas relating to lifelong and independent learning, and personal skills development by students. Fostering an approach which enhances the links between teaching and research as discussed here is likely to support these endeavours.

The QAA Framework for Higher Education Qualifications in England, Wales and Northern Ireland (www.qaa.ac.uk/academicinfrastructure/FHEQ/default.asp) outlines the broad requirements of the five levels of HE study (for Scotland, see www.qaa.ac.uk/academicinfrastructure/FHEQ/SCQF/default.asp). This includes an expectation that graduates will understand and be able to undertake research. More specifically, in hospitality, leisure, sport and tourism subjects, the Unit 25 Subject Benchmark Statement states that Unit 25 graduates will have developed a range of intellectual skills including being able to:

- Research and assess subject specific facts, theories, paradigms, principles and concepts
- Critically assess and evaluate evidence
- Critically interpret data and text
- Describe and analyse information
- Apply knowledge to the solution of familiar and unfamiliar problems
- Develop a reasoned argument and challenge assumptions
- Take responsibility for their own learning and continuing personal development (www.qaa.ac.uk/academicinfrastructure/benchmark/honours/default.asp , p6)

This requirement clearly places an emphasis on the need to support the development of student research skills, so it is appropriate for course teams to devote thought to how to do so within programmes. It may be through research methods training, assignments or completion of dissertations or projects by students. Increasingly there is also discussion regarding the possible benefits of a problem-based learning approach and possibilities for optional synoptic modules as an alternative to undergraduate dissertations. Further consideration may also be initiated regarding how research evidence is effectively incorporated into courses by staff and the departmental strategies necessary to support this. At first it may appear that linking teaching and research centres upon how best to incorporate staff research into programmes of study, in fact as will be seen, the dilemma and debate goes beyond this.

If you wish to consider curriculum design further, then useful information can be found at www.brookes.ac.uk/genericlink/pedagogy.htm. Here four models are suggested to facilitate discussion regarding how best to achieve the link.

For guides and guidelines on curriculum design and pedagogy see: www.brookes.ac.uk/genericlink/pedagogy.htm#guides

For a briefing paper on designing a curriculum that values a research-based approach to learning see: [/www.brookes.ac.uk/genericlink/documents/creative-curriculum.doc](http://www.brookes.ac.uk/genericlink/documents/creative-curriculum.doc)

Scholarship for Teaching and Scholarship of Teaching

Many academics are attracted into education because of their desire to teach, and yet research and publication is often the means by which promotion and academic status in the profession is achieved. In order to support and promote the links between teaching and research it is necessary to consider the role of scholarship in its broadest sense, beyond a focus on research for publication purposes. A definition of scholarship which captures the various roles of academics within higher education is offered by Boyer (1990, X11). He identifies four separate, but overlapping areas of scholarship, these are:

- The scholarship of discovery research
- The scholarship of integration, including the writing of textbooks
- The scholarship of service, including the practical application of knowledge
- The scholarship of teaching

Within these areas, a distinction is also made between the scholarship *for* teaching and the scholarship *of* teaching. Scholarship for teaching relates to the activities of teachers to engage in discovery research and to keep up-to-date with the developments in their discipline, and update their teaching and materials accordingly. Scholarship of teaching relates to the research of teaching and the development of teaching practice, this might include the production of materials that support teaching and learning, or the activities of a teacher in reflecting on their practice.

In terms of the provision of a high quality student experience, it is thus clear that solely incorporating research into programmes of study is not sufficient; the scholarship for teaching, does not replace the need for good teaching practice, the scholarship of teaching.

Research has demonstrated that the nexus between research and teaching has the potential to add value to the learning experience of students. Elton (2001) suggests that a positive link can take place under particular conditions. The link is not so much dependent on the outcomes of staff research (such as publications), but rather, focuses more on the processes of student-centred teaching and research methods such as inquiry or problem based learning.

For further information on scholarship see:

- Elton (2001) Research and Teaching: conditions for a positive link. *Teaching in Higher Education* 6(1): 43-56. www.tandf.co.uk/journals/carfax/13562517.html
- Hutchings (2002) *Scholarship of Teaching and Learning in Higher Education*. An annotated bibliography. www.carnegiefoundation.org/elibrary/docs/bibliography.htm
- The Australian Scholarship in Teaching Project www.clt.uts.edu.au/Scholarship/Home_Page.html

Why Link Teaching and Research?

The Nexus Project (www.cedir.uow.edu.au/nexus/index.html) suggests that "Linking Teaching and Research is essential because it:

- Recognises the importance of both and the synergy created by the inter-relationship.
- Gives credibility to the University and its academics.
- Promotes and supports learning and teaching as a process of intellectual inquiry and discovery rather than as memorising and regurgitating bodies of existing knowledge discovered by others.
- Keeps subjects based on up-to-date research.
- Stimulates students' interest in research and developing their own research skills and areas of interest.
- Leads to students' pursuing higher research degrees which in turn boosts the University's reputation in fields of excellence.
- Keeps lecturers and students up-to-date with new discoveries and ideas.
- Generates new ideas as lecturers and students spark off each other.
- Clarifies ideas and directions.
- Makes teaching interesting and relevant.
- Saves time.
- Builds up a community of scholars enhancing the University's reputation as a centre of excellence which, in turn, generates a new generation of interested scholars.
- Provides opportunities for collaboration among lecturers and students on publications.

Enhancing the Link Between Teaching and Research - a starting point

The Boyer Commission was funded by the Carnegie Foundation for the Advancement of Teaching (www.carnegiefoundation.org/) to prepare a blueprint for America's research universities, in order to reinvent undergraduate education. Although the report is written for American research universities, it is thought provoking and its applicability goes beyond this target audience, thus it is a useful starting point. The focus is a model for undergraduate education that seeks to enhance provision by integrating undergraduate teaching with the existing research activities of the institution. The changes demanded by this type of approach require a radical consideration of current course delivery methods and curricula, and within the wider university, resource allocation methods and what is described as the 'ecosystem' of the university. "The ecology of the university depends on a deep and abiding understanding that inquiry, investigation, and discovery are the heart of the enterprise, whether in funded research projects or in undergraduate classrooms or graduate apprenticeships" (p9). So the approach is based upon the belief that everyone at the university should be a discoverer and a learner, and it is this that is the shared mission that binds together everything that happens on the campus.

The Boyer Commission on Educating Undergraduates in the Research University - Reinventing Undergraduate Education can be found at www.naples.cc.sunysb.edu/Pres/boyer.nsf/ . The report outlines ten ways in which it is possible to change undergraduate education:

1. Make research based learning the standard.
2. Construct an Inquiry-based freshman (first) year.
3. Build on the freshman foundation.
4. Remove boundaries to inter-disciplinary education.
5. Link communication skills and coursework.
6. Use information technology creatively.
7. Culminate with a capstone or synoptic experience.
8. Educate graduate students as apprentice teachers.
9. Change faculty reward systems.
10. Cultivate a sense of community.

The ten factors are explored in detail. Supporting examples are provided and include ways in which:

- Undergraduates can be involved in the research process, moving from a culture of students as receivers of information to that of inquirers or investigators.
- Scholar-teachers, who both conduct research and teach well, benefit from the synergy between teaching and research.
- Internships can be used to apply research principles in context that could not be replicated in the classroom.
- The first (or freshman) year can be used to excite students and build a bridge between previous and university study experience.
- Inter-disciplinary study can be fostered by breaking the traditional disciplinary moulds within university structures.
- Current and recent research can be brought into the classroom by using information technology creatively.

Finally, the need to reconsider the broad ranging accepted norms, systems and procedures within universities in order to facilitate change are acknowledged, and suggestions made for how this could be achieved.

Project LINK

Project LINK was a three year (2000-2003) Fund for the Development of Teaching and Learning (FDTL) project designed to investigate and develop the link between teaching and research in the built environment disciplines. Much of the material is generic and relevant to all disciplines of study, including HLST. This site is almost a 'one-stop shop' for information, resources, case examples and links regarding the teaching and research nexus.

Linking Teaching with Research and Consultancy in the Disciplines of Planning, Land and Property Management and Building

www.brookes.ac.uk/schools/planning/LTRC/index.html.

Aspects of note include:

Fifteen points from LINK - a series of statements which outline conclusions and findings from the project:

www.brookes.ac.uk/schools/planning/LTRC/about.html

A detailed set of guidelines to linking teaching with research:

www.brookes.ac.uk/schools/planning/LTRC/guidelines/index.htm

Changes strategies and processes to foster the link at departmental and subject group level:

www.brookes.ac.uk/schools/planning/LTRC/change/change-strategies.htm

Resources

Extensive links are provided via the project LINK:

www.brookes.ac.uk/schools/planning/LTRC/index.html

and the Higher Education Academy project website (formerly the LTSN Generic Centre) www.heacademy.ac.uk/850.htm identified above, and these are suggested as the most appropriate starting points. A selection of sources of potential interest are also:

Research Led Teaching and the Scholarship of Teaching Project

www.itl.usyd.edu.au/rlt/

This project at the University of Sydney is exploring ways in which teaching and research can be brought together to enhance student learning. It includes a searchable database of examples which demonstrate how this can be achieved.

The Carnegie Foundation

www.carnegiefoundation.org/index.htm

Their mission is "to do and perform all things necessary to encourage, uphold, and dignify the profession of the teacher and the cause of higher education." Based in America, the foundation is a national and international centre for research into teaching and learning. An e-library provides access to an extensive range of publications relating to the scholarship of teaching.

The University of Wollongong Nexus Project

www.cedir.uow.edu.au/nexus/index.html

The NEXUS project investigated the teaching-research nexus and established that "a strong link promotes teaching and learning as a process of enquiry where lecturers and students work in partnership in the construction and dissemination of new knowledge and understanding and its application to real life situations." The site provides case study examples of linking teaching and research and a summary of the Vice-Chancellor's October 2001 Symposium on the Nexus.

Exchange - Issue 3, Autumn 2002: Linking Research and Teaching

www.exchange.ac.uk/issue3.asp

This issue of Exchange focuses on the ongoing debate regarding the teaching-research nexus. It presents various perspectives, including opinions regarding national policies and funding arrangements in support of the nexus, the synergy between institutional teaching and research strategies and how to enhance the link within departments.

Pocklington, T and Tupper, A (2002) *No Place to Learn - Why Universities Aren't Working*. University of British Columbia Press, Canada.

www.ubcpres.ca

This text, written by political scientists, is aimed at general readers. It critically examines Canadian Universities, how they operate and how they may be reformed. In the opening paragraph it is suggested that "Canadian universities no longer provide effective, high quality undergraduate education" (p3). Three themes are covered; how modern Canadian universities devalue the education of undergraduates; how research outstrips teaching in importance and is often far removed from the needs of undergraduates; the increasingly close links between universities' governments and large corporations. In particular, chapter six examines the interplay between teaching and research.

Brew, A (2001) *The Nature of Research: Inquiry in Academic Contexts*. Routledge Falmer, London.

www.routledgefalmer.com

This is a study into the nature of research today and acts as a stimulus to consider how research may need to adapt in the future. This includes an argument for a wider perspective to be taken regarding the nature of research and discussion of the implications for links between teaching and research.

Jenkins, A, Breen, R, Lindsay, R and Brew, A (2002) *Reshaping Teaching in Higher Education: Linking Teaching and Research*. Kogan Page, London.

www.kogan-page.co.uk/

Building on a review of research evidence and practical experience, this book investigates how academic research can be connected to teaching in such a way that each activity enhances the other. A range of strategies are provided for individuals, course teams and institutional levels and the implications of national policy are also considered. The text is supported by international examples.

In promoting the links between teaching and research there is discussion concerning the suitability of problem-based and inquiry learning as means by which students are encouraged to adopt a discovery or research approach to learning. For information on Problem-Based Learning (PBL) see www.heacademy.ac.uk/709.htm and for Inquiry learning see for example www.mcmaster.ca/cil/inquiry/index.htm

Linking Teaching and Research in Hospitality, Leisure, Sport and Tourism

Hemingway, J and Green Wood Parr, M (2000) *Leisure Research and Leisure Practice: Three Perspectives on Constructing the Research-Practice Relation*, *Leisure Sciences*, 22, pp 139-162.

www.tandf.co.uk/journals/default.html

This article provides an in-depth consideration of the leisure research-leisure practice relationship. Three perspectives on constructing the interface are examined; the traditional, the personal and the critical, and the benefits approach to leisure is used as a test case for each perspective. The starting point for this work is that leisure research and leisure practice are independent professional paradigms, thus the aim of the article is to identify and construct the relationship between the two. It is concluded that the "critical perspective enables the most dynamic research-practice relation".

Thomas, R and Harris, V (2000) Teaching Quality and Staff Research: are there connections? A case study of a Metropolitan University Department, *Quality Assurance in Education*, 8(3), pp 139-146.

www.emeraldinsight.com/rpsv/cgi-bin/emeraldbd?type=browse&order=title&letter=all

The difficulties and differences in current approaches to measuring research activity and teaching quality in the UK are discussed. The main focus of the paper is a case study of the experiences of academic staff and students within a services management department, particularly to examine the extent to which staff research contributed to student learning and to identify any potential costs to student learning as a result. It is concluded that there are benefits to both staff and students. There is evidence of a teaching and research nexus, the nature of this is complex and thus needs to be nurtured within departments.

Delivering Higher Quality

www.hlst.ltsn.ac.uk/projects/tribe.html

A LTSN Hospitality, Leisure, Sport and Tourism funded project which investigated the views of tourism lecturers concerning their perception of the quality of tourism education. The findings for this project are that, in overall terms tourism higher education is highly rated both by the QAA and by tourism lecturers. A key challenge which emerges from the lecturer survey however, is that there is concern that there is insufficient time for lecturers to maintain their personal scholarship activities, and that this may lead to concerns in terms of the currency and innovation within the tourism curriculum.

Examples of making effective links between teaching and research in HLST can be found in Issue 9 of LINK www.hlst.heacademy.ac.uk/resources/publications.html and learning and teaching case studies at

www.hlst.heacademy.ac.uk/resources/Cases/case_studies.html

About the Author

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If you are aware of sources which are likely to be useful additions to this guide then please contact us with the details. Of particular interest would be references to work relating to Hospitality, Leisure, Sport and Tourism subject areas.