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## **Promoting Scholarship - The Way Forward: Learning & Teaching Research in a Complex Environment – A Typology**

### **Introduction & Background**

The quality of teaching within Universities has received much public attention in recent years - most notably in the context of the National Student Survey (see HEFCE, 2009) which puts the UK Higher Education Sector under the spotlight on an annual basis. Such attention reflects academic debates concerning the quality of university teaching over the past two decades (Barnett, 2005; Biggs, 1996; Prosser & Trigwell, 1999; Ramsden, 1992). Much of this debate is grounded in the concept of Scholarship proposed by Boyer (1990), who argued that there are four separate, but overlapping areas of scholarship (discovery, integration, application and teaching), each of which is integral to academic work. The first of these, the scholarship of discovery comes closest to the concept of research and is often perceived to be at the 'heart' of academic life. The scholarship of discovery contributes to the sum of human knowledge, incorporating disciplined investigation through the *pursuit of knowledge* (p 18). It focuses not just on outcomes, but also on process. Linked to the scholarship of discovery is the scholarship of integration; however, the difference is that the scholarship of discovery asks what is it we want to find out whereas scholarship of integration looks at what the findings mean. By *making connections across disciplines, placing specialities in larger context* (Boyer, 1990, p18), the scholarship of integration moves beyond traditional boundaries to involve a variety of scholarly trends including those that are *interdisciplinary, interpretive and integrative* (p 21). In doing so it synthesizes and interprets academic work to bring new insights to original research. The third area of scholarship identified by Boyer is that of application. This is tied to disciplinary knowledge and encapsulates the concept of work-based learning. Boyer argues that the scholarship of application is far more dynamic than the simple acquisition and application of knowledge in that it necessitates the acquisition and application of skills and insight. The final area identified by Boyer, the scholarship of teaching, involves a dynamic process linking teachers understanding and students learning. The scholarship of teaching means that *scholars are also learners* (p 24). Teaching not only involves transmitting knowledge but also involves transforming and extending it. In discussing the importance of teacher knowledge Boyer

argues ... *As a scholarly enterprise, teaching begins with what the teacher knows. Those who teach must, above all, be well informed and steeped in the knowledge of their fields* (1990, p 23).

Whilst from Boyer's perspective, the relationship between the different areas of scholarship may be defined as conceptually and pedagogically interdependent, one significant weakness with his approach is that whilst he argues that what is needed *is a more inclusive view of what it means to be a scholar - a recognition that knowledge is acquired through research, through synthesis, through practice and through teaching .....* (1990, p 24) the basis upon which this assertion is made does not itself appear to be grounded in research, but rather offers a purely theoretical approach. Much previous literature also critiques the notion of a linkage between teaching and research (see for example, Jenkins et al, 1998; Robertson & Boud, 2001; Jenkins, 2004) focusing on the concept of discipline-specific research and how it may be applied within a teaching setting. Such research suggests that whilst discipline-specific research may be linked to teaching, such a linkage is at best tenuous, and at worst non-existent (Zaman, 2004).

Described as '*amongst the most intellectually tangled, managerially complex and politically contentious issues in mass higher education*' (Scott, 2005, p 53) the debate regarding the relationship between research and teaching continues. Developing this debate one stage further, arguments that in order to achieve high quality scholarly outcomes, university teachers need to adopt an approach to teaching similar to that of research, founded upon academic rigour and evidence (Healey, 2000; Trigwell et al, 2000; Elton, 2005) represents what some appear to perceive as a somewhat contentious notion. Indeed, the concept of evidence-based practice in higher education teaching is at best deemed to be 'wishful thinking' and at worst continues to be much maligned.

This paper provides an overview into a distinctive typology of Learning and Teaching Research developed at a relatively small, research-led UK University. Based upon the research into staff perceptions of the relationship between learning and teaching research and practice, the model represents an holistic approach to evidence-based learning and teaching practice in Contemporary Higher Education

### **The LTR Nexus Project: Methodological Approach**

Adopting a philosophical approach based upon a multi-phenomenographic pedagogy (Robertson & Bond, 2001 & Trigwell et al, 2005), and utilising grounded theory analytical

techniques (Strauss & Corbin, 2001), the first stage of the Learning and Teaching Research (LTR) Nexus Project captured the views of 35 early career academic staff who were asked to reflect upon their perceptions of the relationship between learning and teaching research and teaching in their particular department or research group and to draw a diagrammatic representation of this relationship. The staff were drawn from across the University and covered a diverse range of disciplines and professions. This was followed by in-depth interviews with ten academic and managerial staff, and two early-career academics.

Phenomenography is a qualitative approach which has been used over the past three decades to critically analyse learning and teaching (Marton, 1981, 1988, Marton & Booth, 1997, Trigwell et al, 2001; Trigwell et al, 2005). Utilising this approach, participants were asked to 'draw' their answers (in a diagrammatic format) to the following two questions:

1. Describe the relationship between learning and teaching research and teaching practice in your School / Research Group
2. How do you view the relationship between learning and teaching research and your teaching practice?

The use of diagrams in research afforded the opportunity for the researchers to work directly with visual concepts in a creative and imaginative manner. In analysing the data the two researchers adopted an approach based upon the principles of grounded theory (Strauss & Corbin, 1998). This process involved the analysis of the diagrammatic data in a critical, comparative investigation of conceptual images. The analysis was undertaken by the researchers, initially working independently, before working in collaboration to develop theory grounded in data. The process commenced with each researcher working alone to critically examine each diagram whilst making note of any initial thoughts in respect of conceptual images.

Using theoretical sampling, supported by a process of open coding, each researcher reflected upon the meaning of the diagrams, and in doing so identified key conceptual and sub-conceptual phenomena. Contemporaneous notes were made of the emergent theoretically grounded concepts. Using a process of axial coding, a micro-analysis of the key emergent concepts was then undertaken by both researchers working in tandem. This involved critiquing theoretically grounded relationships between concepts and sub-concepts with an emphasis being given to similarities and differences between the dimensions and properties of the phenomena depicted in visual images within the diagrams. Following this, concepts and sub-concepts were identified through a process of theoretical sampling. These

concepts were discussed in some depth by the researchers who compared and contrasted key comparative themes before agreeing upon how the data should be represented within the categories.

Having reached a mutual agreement in respect of the key emergent themes and concepts, selective coding was used to re-analyse all of the diagrams with the researchers working in collaboration. In-depth notes were made in respect of the researchers' interpretations of the conceptual meanings of each of the diagrams (the reaching of collaborative agreement) and of the thematic groupings of diagrams. The final stage of the analysis process involved an interpretation of the relationships and linkages between the concepts and sub-concepts in which key conceptual themes emerged from the data. Detailed notes were made explaining and exploring the theoretical underpinnings of the emergent themes. By undertaking a constant comparative analysis of the data, the process afforded the opportunity for the researchers to develop theory, grounded in data, and to identify and critique new theoretical ideas and concepts.

The value of using diagrams as a methodological tool was that they afforded the researchers the opportunity to work directly with visual concepts whilst allowing the participants to express themselves in a creative and imaginative manner. Previous attempts to persuade staff to participate in in-depth interviews on this subject proved almost impossible as staff were reluctant to offer their thoughts and feelings in such a direct manner. Each diagram was accompanied by a short descriptive passage of written discourse aimed at contextualising the individual's perceptions.

Having analysed the diagrams, an interview schedule was developed out of the themes identified in the analysis of the diagrammatic data. Ten in-depth interviews were conducted. The interviews were tape-recorded and transcribed at a later date, and were analysed using grounded theory methodology. A meta-analysis of the data from both stages of the research was then undertaken and two main concepts, that of scholarship and organisational change identified.

## **Discussion of Findings**

Utilising simple and axial coding, two main concepts emerged out of the analysis: Scholarship and Organisational Culture. Additionally, within these two main concepts, several sub-concepts were also identified and the relationships between and across them analysed. In the first stage of the research the concept of Scholarship was represented in a

variety of ways utilising pictures, letters and words. An analysis of the diagrams showed that around half of the participants depicted a linkage between discipline-specific research and approaches to teaching – although for most this link was shown as being somewhat weak. Examples of how participants showed the link included a 'dotted' line, intermittent arrows and barely touching circles within a Venn diagram. In the diagrams that did depict a link between learning and teaching research and learning and teaching, the relationship was often drawn in a manner that depicted a degree of complexity or even confusion; with drawings of question marks 'mazes' or 'web-type' metaphors evident in several pictures. In response to the first question, the remaining diagrams did not reveal any awareness of a link between teaching and research of any type. With regards to the second question around a third of the participants suggested a link between teaching and learning and teaching research. Those who showed an awareness of scholarship appeared to conceptualise themselves as isolated within their individual Schools or Research Groups. Given that all of the participants in this stage of the research had recently completed an intensive two day residential course about learning and teaching research and evidence based practice in higher education teaching, that only the minority of participants depicted a link between learning and teaching research, discipline-specific research and teaching was somewhat disappointing.

In the second part of the research, Scholarship was perceived in two different ways. The first of these related to connections between discipline-specific research and teaching – which were seen by some as being loosely connected, whilst others viewed them as separate. Others viewed scholarship as being focused on learning and teaching, with the link between evidence based practice and expertise within a discipline identified as particularly complex and difficult to manage. Three sub-concepts were identified as being integral to scholarship: scholarly activity: learning and teaching research: evidence based practice. Scholarly activity was thought of in terms of the interactions between students, lecturers, and other staff. For some of the participants scholarship was viewed as an essential part of academic life.

Whilst the challenges of engaging staff in learning and teaching research were discussed by all the participants only one clearly identified the linkage between scholarship, and learning and teaching research, as being encapsulated by engagement with the pedagogical literature. Several emphasised that from their perspective, pedagogic research had never been considered important or of value.

The research focused nature of the environment was reflected in comments by several participants to the effect that the best way to achieve a culture in which teaching practice is based upon evidence, and learning and teaching research, is for those responsible for engaging directly with pedagogical research to lead by example, and encourage others to engage with the discipline by using the research language that others understand.

One of the main barriers to participating in learning and teaching research identified in the research was the time pressures faced by staff – particularly in terms of academic teaching load, and the fact that LTR was not represented on the University workload model. Another barrier was the low priority and importance given to LTR in comparison to discipline specific research. The need to raise the profile of LTR, particularly at senior management level was raised by several individuals.

The practical value of learning and teaching research in promoting evidence-based practice was raised by over half of the participants – many of whom noted that it can be difficult to persuade students to move beyond 'traditional' learning and teaching techniques such as lectures.

The second concept identified in the research analysis related to that of organisational culture. In the first stage of the research this was further divided into three sub-concepts: isolation, expertise and pressure. Isolation was depicted using a range of metaphors including sitting alone in a boat surrounded by a 'sea' of colleagues and students and standing alone on top of a 'teaching mountain'. Around a third of the participants depicted a culture of 'expertise' and 'instruction' showing themselves as the expert and the students as the recipients of their knowledge. A recurrent theme, expressed by a small majority of participants depicted a culture of 'pressure'. This depiction was divided into two separate camps. The first of these suggested individuals felt they had little or no time for learning and teaching research, and that the concept of evidence-based practice in teaching was somewhat alien. Drawings displaying this varied from circles depicted learning and teaching research as diametrically opposed to teaching, to images of individuals labelled 'LTR' and 'Teaching' facing away from each other. The second group perceived learning and teaching research could somehow 'rescue' them from the pressure of everyday teaching – although there was a lack of clarity as to how this would be achieved. A common metaphor used by this group was that of a 'lifeboat' and stormy seas. The organisational culture was represented by the seas and learning and teaching research by the lifeboat or other rescue implement.

The analysis of the second stage of the research revealed that, from the participants' perspective, the concept of organisational culture was far less substantive than that of scholarship. Within the wider concept of organisational culture, two sub-concepts were identified, that of organisational policy and organisational change.

The change in direction for the institution in terms of policies to promote a move from an emphasis on research towards the incorporation of learning and teaching on an equal basis was discussed at length with several of the participants noting that the perceived change in emphasis to make learning and teaching comparable in importance with research had yet to impact most people.

Somewhat surprisingly, the majority of participants were aware of the role of the newly formed Centre for Learning Innovation and Professional Practice (CLIPP) in promoting learning and teaching research. Indeed the promotion and enhancement of teaching practice through research was generally thought of as being a positive step – one which could potentially change university culture. In support of this the need to embed learning and teaching research into the organisational culture and structure was also widely discussed with many participants believing the best way to do this was for such change to be policy driven – and practically led. Additionally, the role of the wider organisation in general, and the management in particular, in promoting organisational change so that learning and teaching is given more priority was highlighted across the board.

Whilst acknowledging the move towards evidence-based learning and teaching reflective of organisational policies promoting change, all of the participants also suggested that embedding the change may take some time – particularly in terms of recruitment.

#### **- Evidence Based Practice: Towards a University Wide Model of LTR**

In looking at the wider context it is necessary to consider the implications for Aston University of the NSS (2009), particularly in relation to students' concerns about their learning experience. This in itself relates directly to the concept of Scholarship. In order to guarantee the future competitiveness of Aston University, Learning and Teaching Research needs to become an embedded part of University culture. Learning and Teaching Research is fundamental to the future success of the University in ensuring that University practices are evidence based, and that learning, teaching and management is fully aligned with School, University and National goals and strategies.



This working paper now puts forward a typology of Learning and Teaching Research (LTR) built upon the empirical study findings. It comprises an evidence-based strategy for the promotion of high quality scholarship, grounded in Learning and Teaching Research, across Aston University. Central to the approach outlined in the below typology is the LTR team and Head of LTR. One of the key advantages of the LTR team at Aston is its multidisciplinary nature. The team comprises an eclectic group of individuals drawn from five different disciplines: Engineering: Public Policy: Sociology: Psychology: and, Education. Such diverse backgrounds allow the team to take a distinctive approach to LTR – one which fits in well with the organisational culture and in doing so promotes scholarship across the University. Increasingly LTR in any discipline is being viewed as a cross-disciplinary endeavour, hence the Aston model with its overarching institutional viewpoint is a beneficial starting point.

### - **Typology of Learning & Teaching Research: A Working Model**

The study findings discussed in this paper have been used to provide the foundation for the proposed Typology of Learning and Teaching Research. The typology comprises seven distinctive components: Research-led LTR: Alignment & Strategic Overview: Technology & LTR: Networks: Champions: LTR Career Paths: and Governance & LTR.

**1. Research-Led Learning and Teaching Practice:** The importance given to research activities, both from a university and individual perspective was evident throughout the study. That Aston University should aim to increase its reputation as a Research-led Institution is a laudable goal. LTR is pivotal to achieving this goal. The research outlined in this paper has begun to show how LTR can be utilised to build capacity through engaging with staff who are not active in their discipline research. However, in doing this, it should be noted that the concept of 'quality' in Learning and Teaching Research is of vital importance when considering how best to build such capacity. One of the main drivers of the desire to increase research activity is the Research Excellence framework (REF). Indeed, the issue of the REF is fundamental to the success of the University. Academic and teaching staff need be given sufficient time with which they may undertake such research.

- **Discipline-Specific Research & LTR:** The need for strategic alignment between LTR and discipline specific research is one which should be fully supported by staff and management alike. The Head of LTR has made significant steps in beginning to build a Community of Practice, focused upon



Scholarship and Evidence Based Practice, across the University. A cross-university research group, entitled CULTuRE<sup>1</sup>, is in the embryonic stages of development, and to date around 60 colleagues have expressed an interest in being part of the group from PVC level down. This is an excellent foundation upon which future Learning and Teaching Research may be built.

- **Evidence Based Practice:** This study has highlighted the need to promote evidence-based practice across the Institution (an issue noted by many of the research participants). LTR is best used to inform and guide the delivery and development of programmes across the University, starting with taking a central role in the Post Graduate Certificate in Professional Practice for new academic staff. The LTR team represent an unbiased resource with an overarching view of university activity, a vital characteristic for enhancement of the student experience through evidence based practice grounded in LTR.
- **School Based Research:** The majority of the participants identified School based research as being an integral part of LTR and the need to improve students' learning experience. An important part of the CLIPP LTR Group is working in collaboration with Schools to promote and enhance excellent evidence based learning and teaching practice. Additionally, the research team are focusing on generic issues such as feedback, student retention, and the need to concentrate research efforts on the whole academic experience.
- **'Purpose for Practice':** The focus of LTR on 'Purpose for Practice' is a term originally coined by one of the paper's authors (Clark, 2009) and was one of the original drivers influencing this study. It forms the basis of the proposed typology and the vision of LTR for the University. The Head of Learning and Teaching Research is in an ideal position to ensure economies of scale are appropriate and that future resources are dedicated in such a manner that is both effective and efficient in nature.
- **Dissemination of LTR:**
  - o **Publications in pedagogic journals:** The importance of publishing research in high quality journals was evident throughout the study. All of the participants alluded to the need to publish research. Whether LTR forms a separate submission to the REF or not is unimportant, the research objectives should be for quality work and quality publications. To this effect staff should be encouraged to disseminate

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<sup>1</sup> CULTuRE: Cross University Learning and Teaching Research Environment

knowledge through 'top rated journals'. To support this the LTR team has produced a directory that is a first step towards identifying the 'top rated journals'.

- **University-Based Learning and Teaching Research Journal:** This idea, originally conceived in 2008, is set for launch in 2010. Such a journal would provide the means by which all staff involved in LTR could disseminate their work across the University and those new to LTR could gain experience and build expertise in academic writing in the area.
- **Workload Model:** The issue of heavy workloads, manifested by large teaching and research commitments was described by all of the participants. One of the most common metaphors used in the first part of the research was 'drowning'. Another was 'pressure'. In order for LTR to become a viable option for staff, there is a need for all those concerned to be given explicit permission and time in which to develop their skills and understanding in this area – and indeed to conduct LTR. One way of doing this is to embed LTR into the University workload model.
- **Strategic Bidding:** In order for the LTR team to prosper there is a need to build research capacity and gain external funding. It is important to note the Learning and Teaching Research team did not exist prior to October 2008. In building the team's reputation in the field the Head of LTR developed a focused Learning and Teaching Research strategy of which 'strategic bidding' represented an integral part. This strategy was, and is, consistent with University priorities. For the team to create a national and international reputation it is necessary that some bids should be made for small amounts of money. Like other disciplines, the pedagogical field has become increasingly competitive of late. It is essential therefore that the LTR team be encouraged to bid for smaller amounts of funding, as well as for full economically costed bids. This strategy may be likened to new businesses in the process of developing a market offering 'loss leaders' in order to build a customer base and reputation.
- **Leadership in LTR:** LTR needs to be conducted and deployed in such a way that makes a difference at subject level. The multi-discipline nature of the LTR team, lead by the Head of LTR at Aston University, is such that members are able to offer a high level of competence across several key disciplines.

- 2. Technology, LTR & Teaching Practice:** The need to fully exploit technology is a matter that was not raised by any of the participants. Moreover, as an example, a critical review of the literature concerning lecture capture (Clark et al, 2010) found that there is little empirical evidence to support the contention that the technology in question enhances or enriches students' learning experiences. However, that there is no evidence supporting (or refuting) the value of technology in enhancing teaching does not mean that this is an area that should be ignored. Indeed, the role of LTR in making sure that any expenditure on learning technologies is carefully researched and critically evaluated is central to the future usage of technologies (both when considering the financial and pedagogical implications of such expenditure). At Aston University, the multi-disciplinary nature of the CLIPP LTR team means that the team is ideally suited to support this work.
- 3. Alignment & Strategic Overview:** Many of the participants indicated a need for LTR to be aligned with other University research, teaching, administration and management practices and policies. The authors of this paper feel that Learning and Teaching Research has a central role to play in providing empirical evidence regarding the pedagogic value of modules and programmes. The need for alignment with central and teaching services was evident throughout the research. However, Strategic Alignment is wider than this and includes taking account of issues such as graduate employability, transferable skills and staff development.
- 4. National and International Linkages & Networking:** Throughout the study, the importance given to networking and profile has been evident. It is vital that the University LTR group participate fully in, and contribute to, internal and external professional and subject-specific networks. The linkages built since the inception of the CLIPP LTR have enabled the Head of LTR and the rest of the group to build up good relations with leaders in the field. This has been built on the growing credibility of a developing group.
- 5. LTR and other CLIPP Champions:** Further study is needed in this area. The research discussed in this paper did not focus specifically on the 'Champion' model as the approach in itself merits individual pedagogical enquiry. The idea of School based 'Champions' for all CLIPP activities was introduced when CLIPP first came into being. To date, this model has only been partially successful in all areas. The main reason for this is reflective of the restrictions placed on the

Champions in respect of the amount of time and resources they have been permitted to spend on CLIPP related work. There is a clear need to promote a more collegiate environment in which staff are encouraged to undertake Learning and Teaching Research. With regards to LTR, an alternative approach would be to allocate a Senior Academic in each of the four Schools who should be responsible for learning and teaching, and for assisting staff to develop their skills in LTR. The academic members of CLIPP LTR will be available where necessary to provide mentorship and leadership as required to less experienced members of staff.

**6. Learning and Teaching Research Professional Career Path:** Despite the fact that since the introduction of CLIPP, there has been the option of a Learning and Teaching Research Professional career path for academic, teaching and research staff, very few of the research participants were aware of this fact. It is evident that the choice of a LTR Professional Career Path needs to more widely advertised and made more transparent. Moreover, those selecting such a career path need to be secure in the knowledge that they will be supported by management at all levels.

**7. Governance and LTR:** A key finding of the study is the need to raise the profile of LTR across the University. In order to achieve this it is suggested that a 'steering group' should be put into place. Led by a Senior Academic (Dean or PVC Level) this group should draw upon the expertise available across the University. It would be best used to guide and inform LTR rather than lead.

#### - **Scholarship, Organisational Culture & Learning & Teaching Research**

The above critique has brought together the four strands of Boyer's (1990) concept of Scholarship. The typology of LTR Research may in itself be utilised to make *connections across disciplines, placing specialities in larger context* (Boyer, 1990, p 18). The first component of the typology, that of research-led learning and teaching practice, may be linked with scholarship in several different ways. In itself, research-led learning and teaching practice is inextricably linked to the Scholarship of Teaching. LTR is a central and dynamic aspect of the process by which teachers transfer understanding to students and in doing so promote learning. Through the pursuit of knowledge, research-led learning and teaching promotes the development of the Scholarship of Discovery. Likewise, the concepts of 'evidence-based practice' and 'purpose for practice' are central to the pursuit of knowledge.

The Scholarship of Application is particularly relevant when considering the relationship between LTR and the student learning experience.

The second component of the Typology, that of Technology, LTR and Teaching Practice represents a distinctive aspect of Scholarship – particularly when considering the Scholarship of Application. Technology represents a particular method of applying knowledge, one which Boyer could not have conceived would have become quite so central to students' learning experiences.

The third and fourth components of the Typology, Alignment & Strategic Overview, and National and International Links and Networks bring together the two concepts identified in the LTR Nexus Project, that of Scholarship and Organisational Culture. In order to change organisational culture it is essential that LTR be aligned with the University's activities – including learning and teaching, discipline-specific research, and management activities. It is only by changing the organisational culture, and emphasising Scholarship that the University will grow and succeed in the future.

The final three components of the Typology represented by LTR Champions, LTR Professional Career Path, and Governance & LTR, all relate directly to organisational culture. Attention needs to be paid in each of these areas in order that the organisational culture may become one which promotes the student learning experience, giving equal priority to learning and teaching and research. LTR represents the ideal mechanism by which this may be achieved.

### **Concluding Remarks**

This working paper has provided an empirically grounded typology of Learning and Teaching Research applicable in a forward-thinking research-led University. The multidisciplinary nature of LTR and the cultural resistance to embedding it within the university research thinking at first appears an insurmountable challenge. The typology, based on research evidence, has highlighted where the difficulties lay and how they can be overcome. The objective and holistic nature of a small central multidisciplinary group working in tandem with discipline based scholars is a model that offers benefits in terms of efficiency, sharing and skill development, at the same time ensuring the 'with purpose, for practice' mantra benefits staff and students at the earliest opportunity.

In conclusion, every development in learning and teaching should be viewed as a research opportunity. The ongoing challenge is how to develop this thinking and embed it within the institutional culture to ensure a sustainable, quality focused LTR culture emerges.

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