

Research Matters: introduction to articles from the University of Brighton annual Pedagogic Research Conference, 2017

DR RACHEL MASIKA AND DR ADRIAN CHOWN
CENTRE FOR LEARNING AND TEACHING

Abstract

This article introduces papers developed from six presentations at the University of Brighton's annual pedagogic research conference held in 2017. The broad aims of pedagogic research are highlighted and the key foci of the pedagogic research focussed conference are presented. Noting that pedagogic research employs a diverse of approaches and adopts a broad range of theoretical and conceptual lenses, the paper then provides a brief synopsis of the articles that follow.

Pedagogic research explores the experience of students and staff in higher education, with the aim of:

- enhancing knowledge of the relations between the curriculum, learning, teaching and assessment
- supporting improvements in decision-making, planning and practice in higher education
- contributing to the development of educational theory (Haig, Cotton and Hall, 2015; Baume and Beaty, 2006)

With these intentions in mind, this publication presents six papers from the University of Brighton's annual Pedagogic Research Conference held in February 2017.

The University has a strategic commitment to the development of pedagogic research and research-informed teaching. As part of this strategy, the annual conference aims to provide a friendly, informal environment in which colleagues from the University and its partner colleges discuss pedagogic research matters and share their experiences. Generally, conference presentations refer to work-in-progress related to one of the following broad themes:

- improving participation, retention and progression
- enhancing teaching, learning, assessment or achievement at all levels of higher education
- curriculum development
- transition into and trajectories through higher education

- relations between higher education and learning in other settings, including work and the community
- the 'student experience'
- research methodology
- digital practices.

Original investigations of student and staff experience ask very varied questions (Norton, 2009); employ diverse approaches and methods of enquiry (Tight, 2013; Trahar, 2013; Canning and Gallagher-Brett, 2010), and adopt a broad range of theoretical and conceptual lenses (Yorke, 2003). The range of conference papers presented here relate to a number of the conference themes and demonstrate this diversity.

In her Introductory talk at the conference, **Professor Rhona Sharpe** discussed researching digital literacy within an institutional context, and emphasised the particular value of local research that examines students' experience of technology. In the first paper, which is based on her talk, Rhona argues that technological innovation and institutional investment in resources must be informed by an understanding of how students behave in an increasingly rich 'digital environment' and specifically how they use digital technology to help them learn. This will enable institutions to exploit resources efficiently and provide the support required by students to use them effectively. In developing this argument, Rhona draws on her experience at Oxford Brookes University. She describes how rigorous local research helped the university community to create an institutional definition of digital literacy; design technology-enhanced learning at university and programme level, and evaluate the extent to which it had been embedded into the curriculum.

In the second paper **Dr Hannah Frith** and **Gabby Barker** explore the theme of inclusive practice in relation to their experience of supervising or supporting undergraduate students with disabilities. Undergraduate dissertations, highly valued for rigorously testing students' academic and intellectual skills whilst emphasising student autonomy, are often regarded as a 'capstone' assessment: the culmination of undergraduate study. Working independently alongside a supervisor is a defining feature of this mode of study. However, the experience of undergraduate dissertation supervision is surprisingly under-researched in comparison with doctoral supervision. The growing diversity of the higher education student body and increasing emphasis on inclusive education, prompted the researchers to reflect on undergraduate supervisory practices and provided the context for the investigation. Eleven supervisors in one UK university Social Sciences department completed an in-depth, online qualitative questionnaire that explored how they actually 'do' supervision, what they consider to be good practice, and their experiences of supervising students with disabilities. Thematic analysis of the data revealed three key themes: 1) an ideal model of an engaged student/supervisor relationship, 2) the challenge of disengagement, and 3) recognising the uniqueness of every student. Individually tailoring supervision to meet students' needs was recognised as good practice, and supervisors saw disengagement as disrupting supervision for students with and without disabilities. The paper includes discussion of what supervisors and students can do to improve the effectiveness of undergraduate supervision.

Sarah Leach and **Dr Hazel Horobin** begin the third paper by noting that simulation-based education (SBE) has been used to successfully deliver components of healthcare teach-

ing within medicine, but is much less common in physiotherapy. Following its introduction to the University of Brighton MSc Rehabilitation Science, their study was designed to explore the perceived influence of respiratory SBE on physiotherapy students' experience of critical-care placements, and the implications for pedagogic practice. A qualitative investigation was undertaken, involving five participants recruited from the 2015 cohort and selected to provide a broad range of experience. Individual semi-structured interviews were recorded and Mezirow's (1993) transformative learning theory (TLT) was used as an interpretive lens to analyse the data. The paper suggests TLT provides an appropriate model for the design of effective simulation in healthcare education. When scenarios are designed with attention to past experiences as well as learning outcomes, they enable participants to become familiar with the environment in which critical care services operate and create opportunities to explore clinical relationships. Devised in this manner, SBE helps students to recognise that the development of skills involves feelings as well as thoughts, and enhances their ability to enact new skills in their clinical work.

The TLT model encourages students and lecturers to understand that feelings of anxiety or stress are an integral part of learning and this is applicable to all learning experiences, not just SBE. In work-related programmes of study, the recognition and management of emotions forms an important, and perhaps neglected, aspect of the skills required for employment. Rather than avoiding stress, strategies for acknowledging and managing it are relevant dimensions of teaching and learning, particularly as preparation for stressful work environments such as those in healthcare.

Problem-based learning (PBL) is a popular pedagogical approach and methodology for curriculum design, especially in higher education for the professions. In the fourth paper, **Dr Nicola Dearnley and Dr Wesley Scott Smith** present research into how case-based learning scenarios influenced the development of students' diagnostic reasoning on a course for Physician Associates (PAs) at Brighton and Sussex Medical School (BSMS). PAs complete a two-year postgraduate course, but are expected to graduate with diagnostic skills equivalent to those of newly-qualified doctors who have completed a five-year course. BSMS has utilised PBL in an attempt to accelerate the acquisition of these skills by PAs. Weekly PBL sessions were conducted during Year 1 of the course, focusing on the 'top 20' core medical conditions within the curriculum. Alongside this, students had weekly clinical exposure in General Practice. To assess the impact of this strategy the Diagnostic Thinking Inventory (DTI) developed by Bordage et al. (1990) was conducted three times during Year 1 and the results were compared to standardised data for medical students and doctors. This assessment found that PA students had a significantly higher baseline score in terms of *flexibility of thinking* (equivalent to newly qualified doctors engaged in foundation training) and *structure of memory* (equivalent to third year medical students). Results showed a statistically significant improvement in structure of memory across Year 1: achieving an improvement in score which took over four years to achieve in medical students. This appears to suggest that PBL can facilitate increased assimilation of diagnostic reasoning skills within postgraduate learners. The research also seems to indicate that the postgraduates entering the PA course already possessed well-developed general reasoning skills, and were able to rapidly employ those skills in diagnostic reasoning at a standard equal to or better than undergraduate medical students.

This paper includes detailed discussion of how professionals think and make decisions. It will therefore be of interest to all those whose work involves helping students to develop their reasoning skills.

In her paper, **Jacky Brewer** reports initial findings from research conducted as part of 'The Scholarship Project'. This three-year, nationwide initiative involves 46 colleges of higher and further education and is designed to create a framework for college higher education (CHE) called The Scholarship Framework. Using Boyer's (1990) scholarship of 'teaching, integration and application' as its theoretical underpinning, The Scholarship Project brings together teachers, students and employers to develop a framework of scholarly activity that will improve teaching and learning by transforming, transmitting and extending knowledge, while also enhancing peer support and mentoring. Initial reconnaissance work involved a survey of all 46 partner colleges to identify and measure employee engagement (EE) and test whether that engagement was scholarly. Drawing on this initial survey, four colleges designed and implemented a trial EE scheme. Jacky's paper discusses the findings of the trial, which are mapped against Boyer's Models of Scholarship and demonstrate that the engagement had a scholarly profile. The implications of introducing similar schemes in diverse institutions are also considered.

Relationships between language and learning are the theme of the final paper, in which **Rachael Carden** and **Marion Curdy**, suggest that there may be an increased learning leap required of non-native English speakers. Two factors appear to have a particular influence on the learning of accounting subjects by students on the International Business degree in the Brighton Business School. The first is '*linguistic confusion*'. Some students have English as their first language (E1L) while for others it is an additional language (EAL). Observation of first-year Financial and Management Accounting classes suggests that EAL students may have to make a greater 'learning leap' (Cousins, 2009) than their E1L peers because they misunderstand the lexis of accounting and finance. Particular problems are caused by '*false friends*' (terms which appear similar in other languages but actually have other meanings in English) and *cognates* (terms which have the same spelling and meaning in other languages). The second factor is '*conceptual confusion*'. This occurs because students have experienced a variety of mathematical pedagogies in their previous educational institutions. This paper is based on a research project that investigated the uses of peer learning through an online discussion board to address these issues and enhance learner inclusion.

The papers included here refer to diverse disciplines, themes, theoretical perspectives and methods of investigation. Nonetheless, they share a common determination to better understand the experience of higher education students and the staff who work with them. Four papers illustrate how small-scale pedagogical enquiries, conducted by practitioners investigating their own work or that of their colleagues, can achieve this aim. The two other papers show the value of enquiry that examines individual experience within a broader institutional context. Taken together, the six papers demonstrate how investigation can improve our understanding of pedagogic practice, broadly conceived, and how the insights it generates can help us to enhance learning, teaching and the curriculum. Publishing the papers provides a means of sharing the insights they offer and we are confident that those who read them will find many of these insights applicable to their own work. But we also hope that reading the papers will motivate col-

leagues to undertake pedagogic research themselves, with the aim of enhancing their practice and presenting their work at future conferences.

Bibliography

- Baume, D. and Beaty, L. (2006) 'Developing Pedagogic Research', in Staff and Educational Development Association (SEDA), *Educational Developments*, 7 (2) p. 1.
- Canning, J. and Gallagher-Brett, A. (2010) 'Building a bridge to pedagogic research: teaching social science research methods to humanities practitioners', *Journal of Applied Research in Higher Education*, 2 (2) pp. 4-9.
- Gove, M. and Overton, T. (2013) *Getting Started in Pedagogic Research within the STEM Disciplines*, University of Birmingham STEM Education Centre on behalf of the National HE STEM Programme.
- Haigh, M., Cotton, D. and Hall, T. (2015) 'Pedagogic research in geography higher education', *Journal of Geography in Higher Education*, 39:3, pp. 299-312.
- Norton, L. (2009) *Action research in teaching and learning: A practical guide to conducting pedagogical research in universities*. Routledge: London and New York.
- Tight, M. (2013) Discipline and methodology in higher education research, *Higher Education Research and Development*, 32:1, pp. 136-151.
- Trahar, S. (2013) 'Introduction. Contemporary Methodological Diversity in European Higher Education Research'. *European Educational Research Journal* 12 (3) pp. 301–309.
- Yorke, M. (2003) 'Formative assessment in higher education: Moves towards theory and the enhancement of pedagogic practice'. *Higher Education*, 45 (4) pp. 477-501.

Biographies

Dr Rachel Masika is a Senior Research Fellow at the Centre for Learning and Teaching, University of Brighton. She co-convenes the annual 'Enhancing higher education through research' conference at the University of Brighton, which focuses on pedagogic research. Her research interests include the enhancement of higher education learning and teaching policy and practice through analyses drawing on social critical theories. Her current research examines transitions of rural students into and through higher education in South Africa.

Dr Adrian Chown is a Senior Lecturer in Higher Education in the Centre for Learning and Teaching, University of Brighton. In addition to teaching, supervision and various other activities, he co-convenes the annual 'Enhancing higher education through research' conference at the University of Brighton, which focuses on pedagogic research. His main research interest is the work and learning of academic staff, and the development of socio-cultural perspectives on professional learning. He is also particularly interested in conceptions of teaching as the process of initiating students into the cultural practices of disciplines and professions.
