BRINGING OUR RESEARCH INTO TEACHING

A Guide For Academics in the College of Social Sciences

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College of Social Sciences

UNIVERSITY OF BIRMINGHAM | HEFi

The College of Social Science undertakes important, purposeful and high-quality research. It also delivers outstanding teaching.   When great research and teaching come together, we truly offer our students something special.

We are aware however from work carried out by academics in the College, that the effective integration of research and teaching requires proactive and informed effort, with the curriculum designed so that appropriate links can be cultivated at an early stage in the student learning pathway. It is important therefore that colleagues understand how they can integrate the relationships between their research and teaching so as to have a positive impact on student learning.

It is with this in mind that this publication has been designed in order to provide an introduction to research-intensive teaching and why it is important in the context of the University of Birmingham graduate attributes. The publication includes twelve invited case studies from colleagues representing all four schools and most of the departments in the College. While disciplinary traditions may influence the precise ways in which how research and teaching are integrated, the case studies provide a helpful window into the innovative research-intensive teaching that is being undertaken across the CoSS as a whole and therefore help to show ways in which a student's engagement with research can take place at different points within a given pathway.

I hope the publication will inspire colleagues as they develop their own approaches and methods to promote research intensive teaching so as to further enhance the learning experiences for all our students.

Professor Richard Back (Head of the College of Social Sciences)

Research-Intensive Teaching – What is it?

The Russell Group proudly acknowledges that their '*research-intensive, world-class universities play an important part in the intellectual life of the UK and have huge social, economic and cultural impacts locally, across the UK and around the globe*.'[1] As a part of this group, the University of Birmingham strives to offer innovative and inclusive research-intensive teaching in order to optimise student learning and prepare students for their futures.

The idea that research and teaching can co-exist at the heart of a university is not a new concept, having been identified in the early part of the 19th Century[2]. Since that time research and teaching have been increasingly integrated; a move that is seen as essential if students are to experience a quality higher education. It is important to stress that whilst research informs teaching, the relationship is reciprocal and teaching also informs research.

> Research intensive teaching develops students' intellectual attributes that contribute to human flourishing. Employers are seeking to recruit graduates with attributes, including critical reasoning, curiosity, autonomy, academic integrity, open-mindedness, attentiveness and good judgment. These are also the human qualities that enable students to become independently minded active citizens who can make a difference in the world.

The Russell Group defines the 6 key characteristics of a **research-intensive learning environment** as being:[3]

- Research forms a fundamental component of course content and curricula options;
- Students benefit from being part of a community comprising world-leading researchers across disciplines;
- Students undertake research and inquiry throughout their time at university;
- Students' own research can also make a key contribution to advancing knowledge;
- Students and staff have access to world-leading research facilities and equipment;
- Research findings inform the creation of innovative new pedagogical approaches.

> ### The University of Birmingham Higher Education Futures Institute (HEFi) describes the following as features of Research Intensive Teaching:
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> - A shift from an often divisive vision of research and teaching as separate and often in competition with each other;
> - Requires curricula based on past principles (such as research-informed or research-based learning) to allow students to learn through a process of critical enquiry, enabling them to change mindset from that of passive 'receivers' of 'knowledge' to active pursuers and creators of it;
> - Blurring the boundaries between staff and students, as learning and advancement of knowledge may occur in a mutually beneficial fashion.
> - Staff and students co-creating new knowledge, and reaping the recognition and benefits which may result from this, such as publication or research success.

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1   www.russellgroup.ac.uk/about
2   Tight, M. (2016) Examining the research/teaching nexus, European Journal of Higher Education, 6:4, 293-311, DOI: 10.1080/21568235.2016.1224674
3   www.russellgroup.ac.uk/media/5515/research-intensive-learning-briefing-may-2017-revised.pdf

Why Is Research-Intensive Teaching in CoSS Important?

It is important that all teachers in the College of Social Science seek to ensure their teaching is research intensive as it:

- Encourages students to understand the importance of research within their own educational journey, and to critically examine this research, developing their own cognitive skills whilst doing so.[4]

- Develops transferable attributes and skills that are considered desirable by many employers, a point supported further by the TEF Gold awarded to the University of Birmingham in 2017.[5]

- Ensures "students' own research can also make a key contribution to advancing knowledge,"[6] with the university noting that there are many examples of student's work being published in "top-rated, academic journals."[7]

- Benefits the academic, with teaching potentially informing or guiding further research, as well as allowing modules to develop organically and subsequently feed into future teaching.[8]

- Helps students become part of a community of research-intensive universities, noting that, "active participation in this global network ensures that our teaching staff engage in and lead best international evidence-based practice."[9]

The Universitas21 group state that a Research-Intensive University offers exceptional opportunities for learning gains by offering all students:

- An opportunity to become part of an intellectually stretching, research-rich, multi-disciplinary learning community comprised of highly talented students and expert academic and support staff;

- Access to a vibrant, flexible and cutting-edge curriculum;

- Transformative and authentic learning experiences grounded in the exacting values of a researcher mind-set;

- Critical engagement in the co-creation of new knowledge and innovation;

- Teaching informed by engagement with research, research informed by engagement with teaching, and academic teachers who use contemporary evidence-based HE pedagogy;

- Unrivalled breadth and depth of personal development opportunities within and beyond the campus;

- A degree qualification that is highly valued by employers;

- Lifelong access to a global community of students, staff, alumni and employers.

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4   Drummond, D. (2012) 'Research that matters Expanding definitions of "research-led teaching" in history', in Miller, A., Sharp, J., and Strong, J. (eds) *What is research-led teaching? Multi-disciplinary perspectives.* London: CREST/GuildHE, pp. 66–73. Available at: www.crest.ac.uk.; Hadjianastasis, M. and Cardona, J. R. (2019) *Research-Intensive Learning in Higher Education: A Literature Review.* Birmingham

5   McLinden, M. et al. (2015) 'Strengthening the Links Between Research and Teaching: Cultivating Student Expectations of Research-informed Teaching Approaches', *Education in Practice,* 2(1), pp. 24–29.; Office for Students (OFS) (2017) 'Teaching Excellence Framework : Year two Statement of findings The University of Birmingham', p. 1. Available at: apps.officeforstudents.org.uk/TEFoutcomes/docs/TEFYearTwo/statements/TEFYearTwoStatement_10003022.pdf.

6   The Russell Group (no date) *Russell Group - About.* Available at: www.russellgroup.ac.uk/about.

7   The University of Birmingham (2017) Teaching Excellence Framework. Available from www.birmingham.ac.uk/Documents/tef/tef-2017-brochure.pdf.

8   Baldwin, G. (2005) 'The teaching-research nexus: how research informs and engances learning and teaching at the University of Melbourne', pp. 1–11.; Dickin, E. (2012) 'Integrating research and teaching in Crop Physiology', in *What is research-led teaching? Multi-disciplinary perspectives,* pp. 46–48.; Stoakes, G. and Couper, P. (2012) 'Visualising the Research-Teaching Nexus', in Miller, A., Sharp, J., and Strong, J. (eds) What is research-led teaching? Multi-disciplinary perspectives. London: CREST/GuildHE, pp. 11–16. Available at: www.crest.ac.uk.

9   The University of Birmingham (2017) Teaching Excellence Framework. Available from www.birmingham.ac.uk/Documents/tef/tef-2017-brochure.pdf.

Research-Intensive Teaching from the Teachers' Point of View

A holistic lens for thinking about the integration of teaching and research from the teacher's point of view can be gained if we draw on Boyer[10] four-part model of 'integrated scholarship':

    i.   **Discovery** – encouraging students to undertake research projects within modules and programmes.

    ii.   **Integration** - contextualising research by incorporating it into teaching.

    iii.   **Application** – demonstrating how research serves to contribute to knowledge.

    iv.   **Teaching** – students and teachers working together on research as a process of shared learning.

Research-Intensive Teaching from the Students' Point of View

A holistic lens for thinking about the integration of teaching and research from a student's point of view can be gained if we draw on the work of Healey[11]. He suggests there are the following four types of research-intensive teaching:

    i.   **Research-Led -** Learning about the research of others

    ii.   **Research-Oriented -** Learning about research processes

    iii.   **Research-Based -** Learning as researchers

    iv.   **Research-Tutored -** Learning through critiquing others' research

Edwards and McLinden[12] building on Healey, further developed the model to include a firth type;

    v.   **Enquiring and reflecting on teaching and learning**

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10   Boyer Commission on Educating Undergraduates in the Research University (1998) *Reinventing undergraduate education: A blueprint for America's research universities*. Available at: files.eric.ed.gov/fulltext/ED424840.pdf.

11   Healey, M. (2005) 'Linking research and teaching exploring disciplinary spaces and the role of inquiry-based learning', in Barnett, R. (Ed.) Reshaping the university: new relationships between research, scholarship and teaching. Maidenhead, UK: McGraw-Hill/Open University Press, pp67–78.

12   Edwards, C. & Mike McLinden, M. (2017) Developing the higher education curriculum: Research based education in practice. Lon don: UCL Press.

Case studies of Research-Intensive Teaching in CoSS

Following an expression of interest call, circulated to colleagues working in departments across the College of Social Sciences, the following thirteen case studies have been developed.

The case studies are designed to inspire and inform. They provide an insight into how colleagues interpret research intensive teaching in their practice and also provide information to help you adapt the activities for your own teaching.

They have been framed around the types of research-intensive teaching outlined on page 5 and are represented in the figure below which shows the holistic relationship between the five types.

Figure 1: Five types of Research-Intensive Teaching[13]

Research-intensive teaching

1. RL: Research Led - Learning about the research of others

2. RO: Research Oriented – Learning about research processes

3. RB: Research-Based – Learning as researchers

4. RT: Research Tutored – Learning through critiquing others' research

5. SoTL: Enquiring and reflecting on teaching and learning

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13   Adapted from McLinden, M., Edwards, C., Garfield, J. and Morón-Garcia, S. (2015) 'Strengthening the Links Between Research and Teaching: Cultivating Student Expectations of Research-informed Teaching Approaches' *Education in Practice*. 2 (1), 24 – 29 https://intranet.birmingham.ac.uk/staff/teaching-academy/documents/public/eip-dec15/mclinden.pdf

Recognising the realities of academic writing and learning thematic qualitative data analysis

Professor Mark NK Saunders, Professor of Business Research Methods
Birmingham Business School

Research Oriented: *Teaching students how to undertake thematic analysis and coding using free form writing, whilst helping them to understand the importance of research within their own educational journey.*

Many students (and colleagues) view academic writing as something that is difficult. This may be because it forces us to clarify and organise our thoughts, perhaps revealing what we don't really understand; or because we fear exposing our ideas to critique others (Saunders et al., 2019)[14]. Yet, students often believe they are unusual in these feelings, particularly when they compare themselves with academics. Research has highlighted that, in trying to address these issues, both students and academics develop rituals and routines which they use to enable or support them to write. This case study outlines an exercise which combines surfacing students' rituals and routines as part of learning about thematic qualitative data analysis. I have used it extensively with both masters and doctoral students in classes about thematic analysis of qualitative data.

Prior to the class I ask students to undertake a free form piece of writing as preparatory work which will provide the data which we will analyse qualitatively. Within this I explain how we will be building on the work of the sociologist Howard Becker and, in particular, his book *Writing for Social Scientists*. I outline how within this book Becker (2007:2)[15] writes '…I turned to a former graduate student and old friend sitting on my left and said, "Louise, how do you write?" I explained that I was not interested in any fancy talk about scholarly preparations but, rather, in the nitty-gritty details, whether she typed or wrote longhand, used any special kind of paper or worked at any time of day. I didn't know what she would say.' I ask them to spend no more than 20 minutes answering the question that Becker posed "How do you write?" and bring four copies (on paper, word processed and double lined spaced) of their freeform writing to the class.

Within the class we focus upon thematically analysing the texts in groups of three or four to answer the research question "How do students write?". Students first read each of their group members' transcripts to start to become familiar with the data. They then discuss how they will code the data, considering whether their codes will come from terms used in the data (in-vivo codes), labels they develop from the data, or from theory about writing. With regards to the latter, we discuss as a class how their data might be coded using theory (Becker, 2007). We consider how people use rituals (RITUAL) to help allay fears (FEAR) and help organise (ORG), and have routines or habits (HABIT) that they associate with writing because it is difficult (DIFF) and they can be easily distracted.

Having made their decision regarding how to code, students then code their transcripts. Once their data are coded they are asked to discuss within their groups the key themes that emerge from their data and the key patterns that emerge in relation to answering the research question. Finally, they are asked to reflect on their own learning in relation to developing codes from the data or theory, how they and others write and the process of thematic analysis.

14   Saunders MNK, Lewis P and Thornhill A (2019) *Research Methods for Business Students* (8th edition) Harlow: Pearson
15   Becker H (2007) *Writing for Social Scientists* (2nd edition) Chicago: Chicago University Press

Developing students as researchers: policy analysis case study

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Research-Based: *Researching, writing and disseminating a policy report whilst developing students' transferable skills that are considered desirable by many employers.*

The intention behind the establishment of the Policy Analysis module was to create a second year core module which equipped students with a combination of academic and employability skills. Drawing on my previous experience as a researcher in a policy rather than an academic setting, I designed the assessment of the module to reflect the sort of activities students might need to complete whilst in employment. This consisted of a policy report based on the research they conducted during the module, a press release to promote their key findings to media outlets but also a short "Today style" radio interview (developing ideas from Kemp et al, 2012).[16] Essentially, the assessment was designed to provide a level of authenticity to non-academic research roles many of our students transition to for a range of organisations after graduation.

Early in the module students are placed into groups and work together to complete several learning activities each week. This helps to generate team-working and a level of familiarity with teammates. This, not only seeks to draw on the benefits of team-based learning, but also provide students with the opportunity to get to know and work with colleagues (Sweet and Michaelsen, 2012).[17] This is essential as students start to engage with methods of conducting policy analysis and start to engage in preparatory work as teams for their research project. The teams:

- Identify a research topic and develop a research question;
- Conduct a STEEPLE[18] analysis of the policy issue selected;
- Divide up tasks within the group, typically by dividing the research topic up into different issues for each team member to be assigned to conduct an appropriate literature review and report back to the team;
- Collectively develop policy solutions based on their review and determine the criteria against which solutions will be assessed;
- Develop the final proposals and present a convincing argument through the report, press release and radio interview.

Students are supported by a team supervisor and are directed towards the use of a specific approach, that of Bardach (2012).[19] This ensures groups have a clear structure for the design of their research project and can focus on developing their practice as researchers to survey the policy debates. Through a range of class activities, students engage and complete a number of these steps during class time to limit the number of self-directed meetings they need to organise around their timetables and other commitments. Through their work, students develop several potential solutions and assess these to draw recommendations. They then develop the communications strategy to promote their findings.

16   Kemp, J., Mellor, A., Kotter, R. and Oosthoek, J.W. (2012) Student-Produced Podcasts as an Assessment Tool: An Example from Geo morphology, *Journal of Geography in Higher Education*, 36:1, 117-130, DOI: 10.1080/03098265.2011.576754
17   Sweet M and Michaelsen LK. (2012) *Team-based Learning in the Social Sciences and Humanities*. Virgina Stylus Publishing.
18   STEEPLE analysis is one variant of the very popular and simple management methods for analysing the external environment. It explores socio-cultural, technology, economic, environmental, political, ethical and legal factors.
19   Bardach, E. (2012) *A Practical Guide for Policy Analysis: the eightfold path to more effective problem solving*. (4th Edition) London: Sage Publications.

Online Learning and Research-Informed Teaching on the MA Character Education

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Research Led and Research Orientated: *Learning how to be a researcher in an applied field through interactive synchronous and asynchronous online learning whilst ensuring that students' own research can contribute to advancing knowledge.*

The MA Character Education is a three year distance learning programme for postgraduate students which is taught online through the virtual learning environment, Canvas. The majority of our students work in schools or universities and study alongside full-time work commitments and outside of regular teaching timetables.

Within the context of online education, student satisfaction is seen as a predictor of student learning outcomes (Eom, Wen and Ashill, 2006).[20] Effective online learning is dependent on *teaching*, *cognitive* and *social* elements of online education (Swan, 2014)[21] and student satisfaction with each of these elements is likely to affect motivation and engagement with learning materials. To help to meet each of these elements and to help to ensure that our students are supported, motivated and engaged, tutors on the MA Character Education adapt engagement processes with students and vary the teaching methods.

The MA Character Education seeks to enable students to apply critical thinking in the development of their own research ideas and to understand how these might be implemented in the social world. In order for our students to develop a foundational knowledge of research methods within the social sciences, and to understand how research methods can be applied within the context of character education research, tutors created a bespoke *Research Methods in Character Education* module for first year students. The *Research Methods* module utilises the full range of available technologies on Canvas, such the discussion boards, online quizzes and web conferencing software. Through the use of different software, tutors ensure that students have varied means through which to engage with the programme and regular opportunities to "meet" virtually with tutors and fellow students.

Tutors on the *Research Methods* module utilise online discussion platforms such as the Canvas discussion boards and the Canvas Conference software. Online seminars seek to replicate the small group teaching and discussion afforded within campus-based, face-to-face seminars. Opportunities for students to communicate and share good practice is considered vital for the effectiveness of online learning programmes within professional education at postgraduate level (McPherson and Bacow, 2015). Furthermore, research suggests that student collaboration within an online context can be beneficial to student learning (Tee and Karney, 2010)[22]. One of the opportunities for discussion within this module centres on different research designs. Students are asked to review character education research and outline examples of at least two different research designs being used in the field of Character Education. Students are encouraged to reflect specifically on the research methodology. In this way, the focus is placed on the research design and methodology and a greater awareness and understanding of the methodology of existing research is enabled; through tutors' and other students' contributions, questions and reflections, students are able to engage with a greater number of different research designs and are supported in reflecting critically on the ways in which research has been planned and conducted.

Quizzes are used as a formative tool in which students can test their knowledge and understanding of the topics contained within each unit, prior to and following each unit. Given the broad range of experience and expertise that our postgraduate students enter the programme with, the *Research Methods* module offers two 'learning pathways': one for students who are new to research methods used within the social sciences and one for students who already have an in-depth understanding of research methods. Students are encouraged to use the interactive quizzes to check their existing knowledge on each unit of learning in order to identify any gaps in their knowledge and to enable them to tailor their subsequent engagement and learning accordingly.

20   Eom, S. B., Wen, H. J. and Ashill, N. (2006) 'The Determinants of Students' Perceived Learning Outcomes and Satisfaction in University Online Education: An Empirical Investigation', *Decision Sciences Journal of Innovative Education*, 4 (2), pp. 215-235. McPherson, M. S. and Bacow, L. S. (2015) 'Online Higher Education: Beyond the Hype Cycle', *Journal of Economic Perspectives*, 29 (4), pp. 135-154.

21   Swan, K. (2014) 'Enhancing E-learning Effectiveness', in Miller, G. (*ed*.) *Leading the E-learning Transformation of Higher Education: Meeting the Challenges of Technology and Distance Education*. Sterling, Va: Stylus Publishing.

22   Tee, M. Y. and Karney, D. (2010) 'Sharing and cultivating tacit knowledge in an online learning environment', Computer-Supported Collaborative Learning, 5, pp. 385-413.

Practice-Based Research on the Post Graduate Diploma in Social Work

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Research-Based: *Learning real-world research skills and undertaking research to tackle practical challenges on a social work placement.*

The Post Graduate Diploma in Social Work (Step Up) is a Department for Education (DfE) initiative, established to increase the number of child and family social workers in English local authorities. Students receive full funding through the provision of a DfE bursary. This fourteen-month social work qualifying programme is an employer led, partnership-based programme; local authorities form a regional partnership, commissioning a university partner to deliver the academic element of the course.

The professional and regulatory requirements underpinning social work curricula include an emphasis on ensuring students develop a critical understanding and application of research evidence in social work and are able to engage in student-led research where appropriate. The programme therefore places an early emphasis on the development of knowledge and skills in using evidence to inform and evaluate practice (Beddoe, 2011)[23].

Students spend half of their programme completing two practice placements, 'hosted' by one of the local authorities and completing both placements in the same agency; most secure employment in the same authority. Social work 'practice wisdom' develops from the student's first experience of practice and through their time on the programme (Samson, 2015)[24]. Through a cycle of critical reflection and 'encounters with the social world' (Cheung, 2016, p26)[25], students develop awareness of gaps in local knowledge, and identify potential areas for their own research. This resonates with the UoB emphasis on students engaging with these 'real-world issues'.

On qualifying and registering with the regulatory body, students are required to complete an Assessed and Supported Year in Employment (ASYE). This first qualifying year enables students to develop a critical appreciation of current issues and priorities for their host authority. In designing the Step Up programme, I based the timetable around this ASYE period; on completion of the Postgraduate Diploma, students are able to return to complete a stand-alone Dissertation module, and the award of MA in social work. Following their initial introduction to research on the qualifying programme, the dissertation module provides the opportunity for students to develop a more in-depth critical understanding of the practical application of research within social work practice contexts. Students develop a Research Proposal outlining their research plans and receive regular support and feedback through dissertation supervision.

The cycle of research informed practice, and practice informed research facilitates the translation of learning back into the social work agency context. It also ensures an investment in researchers of the future and enhances the knowledge base of the profession (Cheung, 2016), 'leaving something of value behind for the future' (Greeff and Rennie 2016 p178)[26].

23   Beddoe, L., (2011) Investing in the Future: Social Workers Talk about Research. *British Journal of Social Work* (2011) 41, 557–575 doi:10.1093/bjsw/bcq138

24   Samson, P.L., (2015) Practice wisdom: the art and science of social work, *Journal of Social Work Practice*, 29:2, 119-131, DOI: 10.1080/02650533.2014.922058

25   Cheung, J.C.-S., (2016) Researching Practice Wisdom in Social Work. *Journal of Social Intervention: Theory and Practice*, 25(3), pp.24–38. DOI: http://doi.org/10.18352/jsi.472

26   Greeff, M., and Rennie, S., (2016) Phronesis: Beyond the Research Ethics Committee—A Crucial Decision-Making Skill for Health Researchers During Community Research. *Journal of Empirical Research on Human Research Ethics: An International Journal, 11*(2), 170-179. doi:10.2307/90012

Initial Teacher Education – How to ensure it is research intensive

Nicola Smith, Lecturer in Primary / Early Years Education
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__Research Tutored:__ Implementing and then critiquing research on the use of children's literature in primary education helping students to develop their cognitive and intellectual skills.

In my role as a lecturer in primary and early years initial teacher education, I have to ensure that students engage with research at 'M' level at the same time as meeting a set of professional standards by the end of the course. As the PGCE/PGDip Ed courses are only one academic year long, there is a temptation to adopt a technician approach to teaching (Liston and Zeichner, 2013)[27], by 'training' students to copy strategies modelled by lecturers and by experienced teachers in placement schools. However, thinking critically about research into teaching is an important part of developing thinking at 'M' level (Lakin and Mason, 2008[28]) and a way of developing teachers who are likely to remain in the profession. Early years and primary students need a strong sense of why they are doing what they are doing, based on the available research evidence. This supports them to develop as effective and resilient professionals who can successfully negotiate the educational, research and policy developments that will inevitably arise throughout their careers.

The approach shared in this case study is 'research tutored', in that I am not encouraging students to enact research findings in the classroom but to critique the research in relation to its practical application. I support primary and early years ITE students to engage with research in the collaborative creation of a primary teaching resource based on their subject knowledge of children's literature. Research by Cremin et al (2009[29]) demonstrates that strong knowledge of children's literature is important if teachers are to be effective in teaching early years and primary English. Students are introduced to this research in a university-based teaching session. I share key findings from the research and link it to other research into how children learn to read, that we have examined in previous sessions. Students are given time to explore the Cremin research on its associated website (Open University, 2014[30]), before small group discussions to consider the possible challenges when putting the findings into practice. Then, they are set the task of using children's literature in their English teaching when on school placement. So that students can share their ideas with one another when they are out on placement, each student contributes teaching ideas based on one children's text per teaching placement to a Canvas discussion board. This allows them to build their collective knowledge of children's literature at the same time as exploring ideas from research in the practical context of the classroom. At the end of the training year, a university-based seminar is dedicated to discussion and critique of the research in relation to its practical enactment in the classroom. I create a .pdf document from the discussion board contributions, which is then a searchable resource of between 50 and 100 texts that students can make use of in their classrooms as qualified teachers. By creating a resource, students have a concrete representation of their understanding of the research findings, which can support them in their first year of teaching and beyond.

27   Liston, R and Zeichner, K. (2013) *Reflective Teaching. An Introduction*. London: Routledge.
28   Lakin, L. and Mason, D. (2008) 'What can I expect my PGCE look like at subject level?' in Sewell, K. ed *Doing a PGCE at 'M' Level: A Guide for Students.* London: Sage, pp.19-33.
29   Cremin, T., Mottram, M., Collins, FF., Powell, S. and Safford, K. (2009) 'Teachers as readers: building communities of readers'. *Literacy*, 43(1), pp. 11–19.
30   Open University (2014) *Research Rich Pedagogies* Available at researchrichpedagogies.org/research/theme/reading-teachers-teachers-who-read-and-readers-who-teach (Accessed 12/06/2020)

Educational Leadership Masters Programmes – Research Intensive Professional Learning and Applied Social Science

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Research Led: *Engaging in and with social science research to enhance professional leadership learning and practice, helping students to bring about educational reform.*

Applied social science is a tricky business – and the senior leaders on our Educational Leadership Masters programmes arguably have it harder than most. Schools are highly complex social organisations, sitting within large and diverse school systems. Few school leaders are content to stand back and offer critique and commentary; most feel compelled to do all they can to improve their schools using the resources at their disposal. However, few will instinctively reach out to research for this.

This short account of our programmes describes why engaging *in* and *with* research is our preferred model of applied social science and powerful professional learning. A masters-level programme brings students to the forefront of research and knowledge. As a tutor team, we are actively working right across this frontier, currently researching a huge range of topics including: cognitive science approaches in the classroom; values-led leadership and leadership theory; how educators can embed arts in the school curriculum; the formation of teachers' professional identities; formative evaluation at scale in large DfE-funded school improvement programmes; new video-technologies to develop teachers' thinking and practice; and the efficiency of governance models using large secondary datasets.

All of this research activity arguably entitles us to describe our programmes as 'research intensive'. In our view, however, mastering the academic literature is only half the battle. As our experience and our own research reveals, putting research into practice is challenging: expertise and considerable school improvement work is needed to contextualise lessons from research for specific subjects and school settings. There is, in other words, a 'distance-to-practice' gap which educational leaders (which we mean in the widest sense) must cross.

So how have we designed the educational leadership programmes to achieve this?

There is a common structure to learning on our programmes: We start with a problem from practice. We ask, 'What Matters?' before asking 'What works?'. We proceed to examine the research in the area. We explore – as a professional learning community which brings together educational professionals from a wide range of settings and from across the world – the research and the problems of educational leadership across contexts. Joint exploration makes for a powerful blend of the general and theoretical, and the concrete and practical. Then – crucially – it is through research and enquiry that leaders can apply the research and their insights to their own contexts, and in so doing, develop new practices and knowledge. There is no 'how-to' manual for educational leadership, so it is often the techniques and practices of research – critical thinking, collecting and analysing evidence, reviewing and presenting ideas – as much as the research itself which effects the most powerful learning and educational change.

And through this approach and ethos, educational leaders on our masters programmes in recent years have explored everything from system leadership for maths professional development across multi-academy trusts in England to developing character and moral strength in Ukraine; from advanced learning theory and assessment approaches which capture and develop depth of learning across a school's curriculum, to examining how to develop rich classroom dialogue across the Chinese school system; and from developing school self-evaluation and improvement policy and process across a multi-campus school in Cambodia, to understanding what headteachers can and should personally do to tackle bullying in their communities.

For all of these, and at the heart of our approach to professional learning in school improvement and educational leadership, is engagement with and in research.

Research-led teaching and Digital Technology: MSc Dissertation project

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Research-Based: *Working in research teams to create a collective academic paper and individual lab report to help students build skills relevant to research careers, meeting the demands of future labour markets.*

In the past decade we have observed significant changes to the labour market, which can be demonstrated by a sharp rise of brand new job titles. In addition to this, people are increasingly working flexibly and in teams across localities or even continents to complete projects. Accompanied by an ever accelerating pace of development of new technologies, this presents the next generation of graduates with both challenge and opportunity. This situation requires education providers to be reflexive, adaptable and to skill students within their programmes to be able to successfully enter the labour market of tomorrow. We suggest that a labour market of the future should be reflected in the education of today.

As a part of the students' dissertation, we have introduced a research led assessment to approximate working in research teams. This intervention enables students to build skills relevant to research careers and conduct research in larger teams. Our approach to assessment not only allows students to exercise this set of skills, but it also focuses on development of graduate attributes e.g. creativity, communication, team working skills. In the example of the dissertation, students work in virtual labs as part of wider teams to create both a collective (academic paper) and an individual (lab report) output. We enable students to perform research-based roles that mirror the expectations and reality of academic research teams through responding to iterative feedback to create a finished product as well as reflecting on their own contribution.

Working in research teams enables students to build skills which are relevant to research careers and conducting research in larger teams. As part of this exercise students are expected to choose the project they wish to be part of and complete an application that mirrors the application process for a job in the field. The project is supervised by an academic member of staff and each student will have a designated role in relation to the project. The research team is responsible for producing an analysis of a dataset in the form of an academic publication (of no more than 5000 words). Furthermore, each student is expected to produce an individual report (of no more than 5000 words). These two elements combined will form a 10,000 word dissertation, which forms 60% of the total grade. Additionally, students are asked to give an oral presentation describing the research process (20%). The final 20% of the grade is a tutors' mark from the project supervisor on a student's individual performance in executing the project work, project plan and initial literature review (20%).

Summer School on Governance and Mobility

Dr. Louise Reardon, Lecturer
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Research-led and Research-orientated: developing a community of researchers to advance the study and understanding of urban transport governance across India, with the aim of helping students to engage with and lead international evidence-based practice.

One of the objectives of our ESRC-ICSSR funded research was to bring together, develop and inspire a community of researchers to advance the study and understanding of urban transport governance across India. Towards this end, one of the key deliverables of the project was a summer school on governance and mobility, which we held in March 2020, in Bangalore. In particular, the school aimed to develop learner skill in identifying research questions and different methodological approaches and research designs for analysing mobility governance.

The summer school was hosted over three days, with 25 master's level student participants from across India, from a range of disciplinary backgrounds (including planning, engineering, geography, and public administration). The programme was both research-led and research-orientated, with learning from the research of others (in this case, from the research team and our project), helping to support student learning about the research process. The School was held in one large classroom on the Indian Institute of Science campus, with the majority of delivery split between large group teaching and discussion, and small group task-orientated work.

Given the multitude of disciplines represented in the cohort, the first session aimed to create a common basis for understanding, with a session titled 'What do we mean by Mobility Governance?' Here we presented a kind of 'governance 101' summarising the state of the art in governance research, and how it links to transport and mobility. The remainder of Day 1 consisted of reading circles, where small groups (facilitated by the research team), discussed seminal research articles from the field (provided to them prior to the School), with the aim of encouraging students to identify (and critically discuss) how the conceptual approaches and methods used in each piece, supported the research aims.

Day 2 aimed to build on the theoretical basis of Day 1, and consisted of methods roundtables, in which participants were encouraged to discuss methods they use in their projects or are commonly used in their disciplines and their advantages and disadvantages. We also led a workshop on how to code and analyse interview data, using an interview from our research project as the basis for the coding. We also led a discussion on the approach we took to the design of our research project – a comparative analysis of mobility governance in India – explaining our rationale, research design, findings and challenges.

In the last session of Day 2, the group was split into teams and instructed to use the toolkit they had gathered over the sessions from the first two days (theoretical, methodological and analytical) to design their own research proposals. Each team was then supported by us as facilitators to develop their ideas across the morning of Day 3, and then to present their proposals to an 'expert panel' and the rest of the cohort in the afternoon. The coherence of the research proposals presented, including the alignment of research questions with their design, demonstrated the achievement of the School's learning objectives.

The Impact of Physical Space on Innovation: An Example of Research Informed Teaching in Action

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Research Oriented and Research Tutored: Learning about research processes and how to critique research through analysing how organisations manage innovation.

Students were studying Innovation Management on an MSc program. It was a module with widely regarded text on Managing Innovation. A lecture had been given by showing the textbook to the students, suggesting that there was a chapter missing. A dramatic device aimed to highlight to the students that knowledge was always advancing through research. We went on to look at photographs of Spotify and Facebook offices and queried why they were laid out in the way that they were. We had previously discussed the social nature of innovation and the importance of serendipitous encounters on creativity. Methods for researching the link between space and encounter were then discussed by drawing on research from architecture.

As part of their assessed work, students were asked to analyse how an organisation of their choice managed innovation. The idea behind this request was to work together with the teacher in a research like process of shared learning where critiquing theory in a detailed and analytical way would encourage students to provide contributions to fill the gap identified in the textbook.

A group analysing Grab, a ride hailing service with operations across SE Asia, presented an argument that this organisation had explicitly used spatial arrangements to improve their innovative capabilities. The students had *discovered* that this organisation had; distributed their innovation activities spatially across multiple countries, not just reserving them for head office; had designed office layouts to encourage the type of social interactions that research had shown encouraged innovation; and even gone to the lengths of designing furniture (all supported with photographs) that the organisation believed enhanced innovation. It was *suggested* that this physical environment was responsible for producing '*hundreds of new innovative ideas every quarte*r'.

After each presentation the students answered questions from their classmates. One of the groups, the 'Grab' group, was bombarded with questions about their analysis of physical space as the class had made a link between space and innovation, which also was recognized by the teacher. This was a clear sign of shared learning.

From the student's perspective, this research led teaching was encouraging a set of behaviours that should be encouraged at Masters-level. Highlighting a gap in a well-respected text made it acceptable to critique existing research and to look for gaps. Working through the logic of the research hypothesis using real world examples made the subject relatable and showing the methodologies employed by architecture researchers provided a glimpse of the rigour with which academics seek to find new phenomena. In this way the class tested whether the principles and theories involved can be applied in practice. This contextualization led to the discovery between the layout of physical space and innovation, which was integrated into the teaching via the shared learning experience. It was a serendipitous encounter that could be integrated in an updated version of the textbook on Managing Innovation.

Enquiring and reflecting on teaching and learning IR theory

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Research Tutored: Using a storyline approach to help students understand the difference between structure and fluidity in research knowledge.

Latest research in International Relations (IR) highlights a tension between structure and fluidity at the heart of the discipline. This presents an important challenge to those who attempt to teach the discipline. On the one hand, the structure of the discipline offers a useful map that holds the discipline together and prevents it from disintegration. Therefore, when students learn IR theories, they learn about realism, liberalism, Marxism, feminism, etc., and these 'isms' present the structure that holds the discipline together. On the other hand, this same structure is problematised in the research for reifying disciplinary history, overlooking overlaps between the theories, and legitimising colonial practices. In teaching the second year IR theory module at Birmingham I therefore asked myself: how can IR be taught today in a manner that maintains this tension between structure and fluidity at the heart of the discipline?

To maintain this tension, to offer the students a structured discipline but also engaging them with latest scholarship that problematises such structures, I employed a twofold method that combines the storyline approach with the discussion-based exercises. The storyline approach enhances the students' grasp of the theories that build the structure of the discipline. Specifically, it familiarises the students with the 'story' of IR as a dialogue between theorists that developed over time. For example, the module begins with classical realism and its argument on the struggle for power in the international being rooted in human nature. The following week the teaching moves to neo-realism and starts with its engagement with and critique of the classical realist assumptions about human nature, before it then explains the neo-realist argument on the struggle for power in the international being rooted in anarchy. This way the students do not simply learn the concept of anarchy in neo-realism but also where it is situated in the story of IR (i.e. in relation to previous arguments on human nature in classical realism).

The exercises on the other hand include activities such as video analysis, group exercises and speech analysis.

Students engage in these activities to apply the theories to a video or speech but to also use the latter to problematise the assumptions within these theories and therefore the 'story' they previously learned about IR. In tandem, these two approaches counterbalanced structure and fluidity at the heart of latest research in the discipline by neither allowing the former dominate and gloss over the latter, nor letting the latter take over to the extent that there is no more discipline left to teach.

Learning about Scientific Method in Cognitive Educational Psychology

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Research Orientated and Research Based: *Learning about scientific method through conducting and reporting on a simple experiment to help students develop essential cognitive skills and research knowledge required for future employment.*

Each lecture in this module presents pivotal theories which help to explain cognitive processing, and these are presented with research studies which either support the theory or offer evidence against it. Typically, pivotal historic studies are presented at the beginning of the lecture, and these are then compared to research published in the past 10 years to offer a narrative of how our knowledge of the cognitive process has changed or adapted over time based on this evidence.

This structure of showing how theories have been updated by research over time is intended to mimic the 'scientific method' which is the most common method used in cognitive psychology. In this sense, the students are shown each week how research is a cyclical process and how theories and research findings are constantly being adapted and updated to inform our knowledge of the topic. As the scientific process is so central to the module, in the first seminar of term, students are asked to carry out a simple experiment based on the 'Stroop task'. Working in small groups, they complete the Stroop task, allocating roles as experimenter and participant and following instructions on how to carry out the task and collect results. Once this is completed, they are then asked to try and identify;

a) what they think the purpose of the task is; b) what question the study helps to answer; c) what was measured and how; d) what does the study show; and, e) what topic of cognitive processing they think it helps to explain. They then map their answers onto the scientific method (using figure 1) to give a visual representation of how each of these areas feed into each other.

Throughout the module these key features of a study (i.e., 'aims', 'research questions', 'method', 'results' 'conclusion' and 'what does this mean') are then always used to break down a research study. For example, these are used as subheadings on all power-point slides when describing any empirical research. At the beginning of the semester, these subheadings are filled in by me but as we progress through the semester, some of these are left blank or presented with less information. Typically, empirical studies with 'blanks' are the ones which will form the basis of the seminar activity, which aims to explore what these cognitive results mean for education. This is done to encourage students to read the original research papers and means they can use it as a means of formative assessment (i.e., we discuss these subheadings at the start of the seminar and students can reflect on what they understood from the study or what they struggled with). Similarly, these 'blanks' form the basis of some of the 'pause for thought' breaks[31] where students might be asked to think about whether the study supports, contradicts or changes the interpretation of previous research/ theories discussed.

The purpose of using this research process breakdown within and across the lectures/seminars, means students should (hopefully!) have an understanding of the research process that occurs when creating and carrying out an empirical study as well as beginning to understand how this research process can also be used to integrate and synthesis research evidence to form a larger understanding of a topic.

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31   These are 2 minutes of 'quiet time' and occur after the first 25 minutes of the lecture and 25 minutes after the mid lecture break. The intention is to break up the lecture and give students a mini break to refocus their attention!
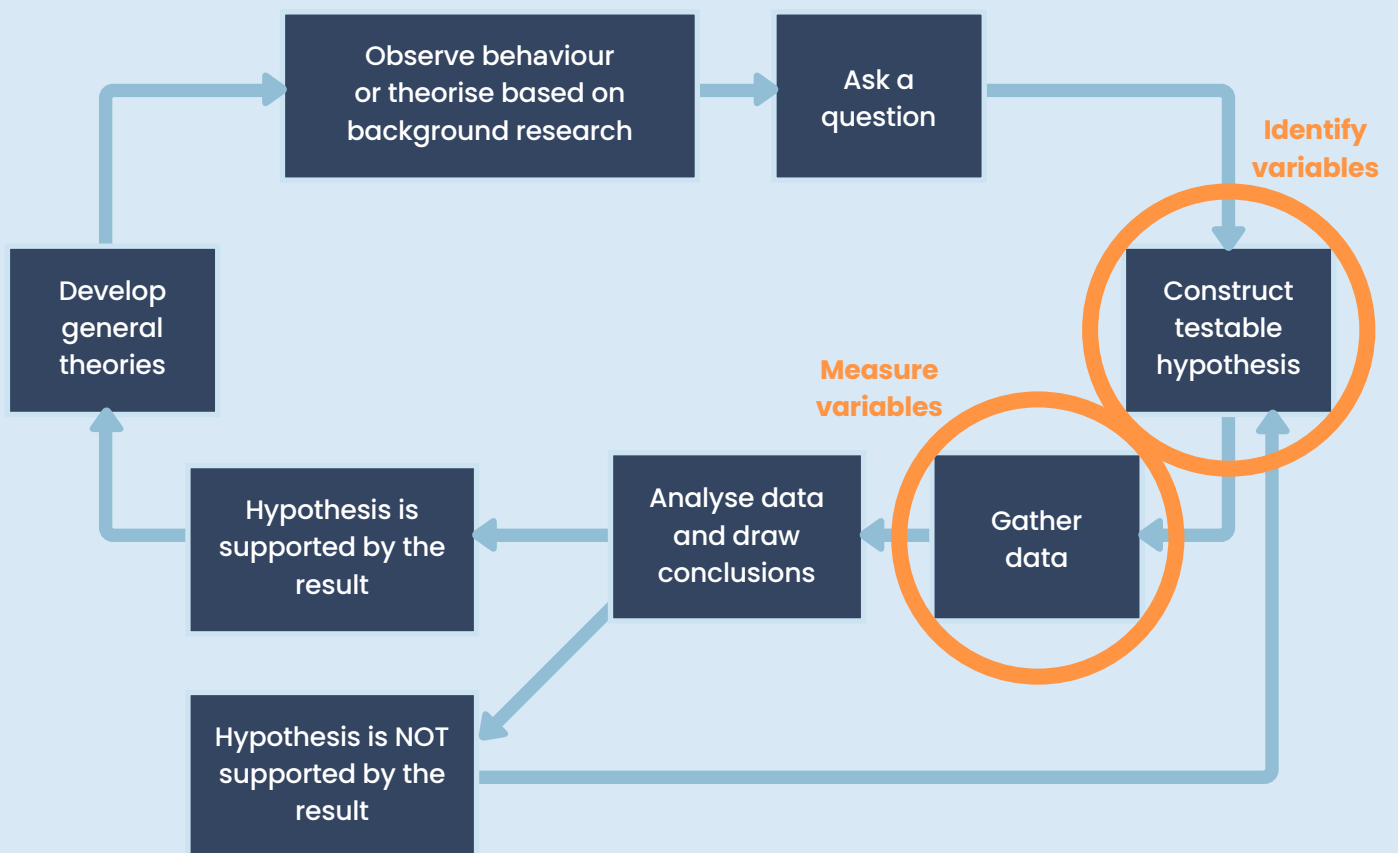
Scientific Method

Figure 1: visual representation of the 'Scientific Method' used in Seminar 1

Introducing students to Ontology and Epistemology through Research

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Research Oriented: *Learning about key research perspectives through a situated pedagogic mechanism enabling students to interpret and critic their own and others' studies.*

Students often struggle to conceptualise and give meaning to research perspectives and this can result in them developing long held misconceptions about the research process. Here, I present an example of how research is used as a situated pedagogic mechanism to explain research perspectives and associated research decisions. The case employed is taken from an online research methods module on a Public Administration (MPA); all students are mid-career public sector professionals, the majority of whom are domiciled outside the UK and Europe.

Throughout, the module draws on two ontologically and epistemologically different research projects, utilizing them as living examples of research, the purpose being to de-mystify the topic and introduce meaning to what might otherwise be seen as abstract research decisions. Following an initial introduction to research, the module introduces students to the notion of social reality and how ontological positions reflect different ways of viewing and interpreting the social world; ontological positions are likened to guides on how we might approach research problems and develop research questions. Specific examples from each project are then provided and critiqued through video. From this, the students are presented with an unmarked formative exercise that asks them to consider how the fundamentals of each research project have been shaped by underlying positions on social reality; this activity engenders student-led enquiry and learning. The module then progresses to a discussion on epistemology and how it aligns with ontology. In doing so, it returns to the two research projects and   provides video discussion on their epistemological positions. Again, the students are presented with an unmarked formative exercise, here, they are asked to reflect on how ontological and epistemological positions align and shape the two respective research projects; students are then directed to a peer-reviewed article that introduces social science terminology and conceptual relationships.

A short summative assignment (5% of overall grade) then asks students to watch two more videos that explore the research approaches of each project. Set questions ask the students to develop a short 200-300 word post that 1) explains why the approaches are – or are not – suitable to address the stated research problems and aims; 2) whether the research approaches are – or are not – in line with their respective ontological and epistemological positions. To facilitate student interaction and critique, students are also asked to comment on two other posts.

Engaging BA Education students in research, enquiry and critical-thinking through research-based learning

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Research Based and Research Tutored; Providing the stimulus and a platform for critical thinking about research into labour market inequalities.

In an increasingly globalised world, which requires graduates to adapt to new resources and diverse work environments, as an educator, I feel responsible for developing students' intercultural competence and problem-solving abilities (to mention a few skills only)[32].

Integrating research – my own as well as others' – into my teaching has enabled me to build connected and inclusive sessions whereby students are both exposed and engaged in research and enquiry as researchers. Here, I share an example of a seminar session prepared for BA Education students in Year 1.

The topic of the session could not be more appropriate. We were examining labour market inequalities, linking higher education to graduate employability. I designed this session specifically bearing in mind my own research on young minority ethnic people's university-to-work transition in France and the UK. Using my own data – extracts of semi-structured interviews focusing on participants' experiences of finding a first job after graduating – from both countries, I built in the session a small-group activity (10 minutes) which required students to read and analyse the extracts. The aim was to compare the ways in which different participants made sense of their unemployment experiences.

Before the activity, I shared background information on the research project and provided cues as to what students could focus on during their analysis (e.g. words, non-verbal information, national contexts). This was necessary to help contextualise the material. The students started by working individually before sharing their notes in small groups.

As I joined group discussions, I was surprised to see the ways in which some students unpacked intricate elements of the extracts (mirroring in some cases, my own notes). When the activity was over, each table shared their discussion with the rest of the group. I then presented my own analysis of the extracts which created a surge in discussion. The main reason was that some students disagreed with my analysis while others almost questioned the validity of my remarks! This was a very enriching experience, because here I was, listening to students who took ownership of the material with their researcher's hat on, generating new knowledge. I will be honest, in some cases, I was lost for words, and ended up asking myself whether I had been biased in my analysis! Building on our shared ideas, we then worked together to create a list of what the participants required in order to overcome employment barriers; using this as a way to also get students to reflect on their own employability.

What can we take away from this activity? The pedagogical aim for sharing research is to provide a platform for critical thinking through combining research-based and research-tutored strategies. The ability to engage in a cross-country comparison offers opportunities to explore current issues within a global perspective, thus building vital skills (e.g. cultural sensitivity). Furthermore, having the opportunity to discuss their personal experiences and perspectives enables students to see themselves reflected in their learning, thus reinforcing inclusivity.

I appreciate that our own research is not always readily transferable to the modules we teach but it is possible to use data available in relevant literature. Another alternative, which I also implement where possible, is object-based learning whereby students bring an object which reflects a given topic and share the rationale for their choice, thus deploying key research skills (e.g. interrogating the object, conceptualising their thinking). This is a more experiential learning and a personal meaning-making process of the topic . Whatever strategies are used, integrating research into teaching is a fundamental means to position students as participants in their life-long development.

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32   Holmes, L. (2013). Competing perspectives on graduate employability: possession, position or process? *Studies in Higher Education, 38(4),* 538-554.

Useful Publications and Sources of Further Information:

Research Intensive Teaching and Learning at the University of Birmingham

canvas.bham.ac.uk/courses/39296

Boyer, E., 1990. *Scholarship Reconsidered. Priorities of the Professoriate.* NY: The Carnegie Foundation for the Advancement of Teaching.

Healey, M. & Jenkins, A., 2009. *Developing undergraduate research and inquiry.* York: Higher Education Academy.

McLinden, M., Edwards, C., Gafield, J. & Moron-Garcia, S., 2015. Strengthening the Links Between Research and Teaching: Cultivating Student Expectations of Research-informed Teaching Approaches. *Education in Practice,* pp. 24-29.