

<p>Institution: Manchester Metropolitan University</p> <hr/> <p>Unit of Assessment: C25 Education</p> <hr/> <p>a. Overview</p> <p>Education at MMU was rated internationally excellent in the 2008 RAE, being placed 8/82 in the Times Higher league tables with a GPA of 2.65. 55% of output was rated 3* and 4*. Research excellence has been sustained and further developed, with a similar size return (n=24=22.5fte) being made at a higher level of quality; 87 books, 277 journal articles, 204 book chapters and 50+ research reports have been produced in period. Research grants won exceed £2M from more than 50 awards including 10 x ESRC, 1 x AHRC, 1 x Norwegian Research Council, 6 x EU and 30+ from charities, government departments, agencies and local authorities. Business sponsors include Barclays, Microsoft and the BBC.</p> <p>Education research is based in the Education and Social Research Institute (ESRI) located in the Faculty of Education. ESRI is distinguished by a capacity to combine theoretical and methodological advance with the conduct of excellent empirical research. Our reputation is based on the ambition of our theoretical work coupled with a constant iteration of theory with empirical investigation. Our research is multidisciplinary and intentionally diverse in terms of focus and methodology. We are committed to producing the highest quality, theoretically-informed, applied research and evaluation.</p> <p>The Faculty is one of the largest teacher education providers in the UK graduating 1000+ new teachers each year from BA and PGCE courses. It is rated 'outstanding' by Ofsted for both primary and secondary education. It houses STEM Education North West, formerly the DfE-funded Science Learning Centre, and leads the Early Years Professional Northern Alliance, a consortium of nine providers, training 520 Early Years Professionals annually. Returned members of staff lead and are drawn from a broader group of active researchers (n=72) across the Faculty.</p> <p>Research groups comprise: Cultural Studies of Children and Childhood (CSCC, led by Jones and MacLure); Difference, Diversity and Social Justice (DD&SJ, Piper and Schostak); Maths and Science Education (MSE, Brown and Solomon); Technology, Innovation and Play for Learning (TIPL, Lewin and Whitton); Theory, Methodology and Knowledge Production (TMKP, MacLure). This latter group underpins substantive research activity and highlights our internationally leading contribution to the discipline. There is also a research development group (Building Research in Teacher Education: BRiTE led by Brown); this overlaps with Maths and Science but includes a wider group of staff working on teacher education research and professional development more generally.</p> <hr/> <p>b. Research strategy</p> <p>Education at MMU combines a world leading research group with a major teacher education provider. The strategy is to sustain research excellence while developing research capacity within a professional Faculty responding to other policy and accountability pressures. This has been achieved. ESRI has a mix of experienced and developing researchers, a high investment in staff development, and extensive links with practitioners, funders and policy makers. Returned members of staff (n=24) are drawn from a broader group of active researchers (n=72) across the Faculty. This wider group has grown from n=51 reported in 2008.</p> <p>ESRI aims to:</p> <ul style="list-style-type: none"> lead debate, nationally and internationally, on the nature and future of education and educational research; contribute to the development of theory and methodology in applied social research; promote research-based understandings of policy and practice in education and the professions; support practitioners and professionals in researching their own practice and contexts of work; work closely with the users of social research at all stages of the research process; provide first-class research training and support for new and developing researchers. <p>These aims are pursued by:</p> <p>bidding for and undertaking a wide range of research projects, from 'blue skies' research funded by research councils to focussed evaluations sponsored by local authorities, charities and government departments;</p>

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organising influential symposia at key international conferences and editing special issues of journals to showcase the resulting outputs (20 special issues in period); organising dissemination and impact engagements with local and national policymakers including via ESRC-funded Seminar Series and 'Follow-on' funding; training and supervising research students including on our professional doctorate (EdD), and teaching on undergraduate and postgraduate Faculty programmes.

A key issue for strategy is to sustain an internationally leading research group in tandem with continuing to develop early career and beginning researchers across the Faculty. An explicit element of our strategy is to pursue the highest quality ratings in the RAE/REF to generate income, some of which can then underpin more general Faculty research development. The Faculty also supports staff to obtain doctorates (see 'c' below). There are 24 REF-returned researchers, 25 'associates' (publishing regularly but not submitted, including emeritus), and 23 'developing' researchers (beginning to publish). Membership of ESRI includes active researchers in congruent disciplines e.g. Taylor (Sports Science). Research students are linked to research groups.

Torrance directs ESRI and is also Associate Dean for Research in the Faculty of Education, an appointment confirmed after 2008 to embed further our development strategy across the Faculty. Research groups comprise: Cultural Studies of Children and Childhood (CSCC, led by Jones and MacLure); Difference, Diversity and Social Justice (DD&SJ, Piper and Schostak); Maths and Science Education (MSE, Brown and Solomon); Technology, Innovation and Play for Learning (TIPL: Lewin and Whitton); Theory, Methodology and Knowledge Production (TMKP, MacLure). These groups are broadly similar to those reported in 2008 but with some change of emphasis and priority to reflect emerging agendas and new staff (see 'c. People'). There is a research development group (Building Research in Teacher Education: BRiTE led by Brown) which overlaps with Maths and Science but includes a wider group of staff working on teacher education research including recent developments in school-based training (e.g. Hammersley-Fletcher, Smith).

ESRI members normally contribute to two research groups, as 'core' and 'contributing' members respectively. Membership of groups is flexible to accommodate new initiatives. Research groups review activity, develop proposals and support publication plans. The professoriate lead research groups, review progress and develop strategy. Quality and productivity are monitored across the Faculty via termly professorial meetings and reported at Faculty level by Torrance's membership of Faculty Executive Group. Research is also monitored at individual level via annual Professional Development Reviews (PDRs). There is a university Quality Assurance system for monitoring doctoral progress. This comprises annual reviews of individual student progress and presentations by students at an annual research student conference. It also includes feedback on quality of supervisory support and reflections on progress from students themselves.

MMU funds Research Institutes from QR income, augmented by research grants and contract overheads. The ESRI budget is used to:

- i) Generate additional research income by developing proposals and responding to tenders. This funds research fellows and expands research activity across the Faculty. The aim is a 'multiplier effect' from QR income with 'associate' members supported to co-publish with active researchers (e.g. Jolley with Heywood 3 and Parker 1; Hodson with Smith 1,2,3,4). The overall profile of grants, activities and publications is monitored by termly professorial meetings to optimise the range of sponsors that support ESRI's work and benefit from it (see 'd'. Income)
- ii) Employ and develop Research Fellows (RFs) and Research Associates (RAs), including to search and recruit internationally (e.g. Daza from the USA, Pais from Portugal), and retain key researchers between contracts, with project income recharged to underpin QR commitments (see 'c. People')
- iii) Support core members and encourage 'associate' and 'developing' members via teaching remission for Faculty staff in response to annual competitive bids for research time (e.g. Barron, Batsleer, Smith; see also promotion to readerships in 'c. People');
- iv) Support conference attendance and similar dissemination and staff development activities.

c. People, including:

i. Staffing strategy and staff development

Staff turnover has been managed successfully. We have maintained a core of world leading researchers and made excellent early career appointments. Abbott, Hall and Somekh have retired. Hall and Somekh are retained as Emeritus. Jones (professor) and Holmes (reader) have replaced Abbott and Hall. Stronach has left, replaced by Solomon. Somekh was replaced by Facer. Facer

was in post 2008-12 then moved; this post was broadly associated with the role and use of educational technology and has been replaced by internal promotion (Lewin, Professorial Research Fellow). New Research Fellow and Research Associate appointments have allowed us to restructure the age and experience profile of the unit. Overall, appointments and promotions include 4 Professors (Jones, Lewin, Piper, Solomon), 1 Senior Research Fellow (Whitton), 5 Readers (Hammersley-Fletcher, Heywood, Holmes, Lancaster, Savage), 6 Research Fellows/Associates (Allen, Allendyke (formerly Dyke), Bright, Daza, McNicol, Pais). All readership promotions have developed through the teaching remission scheme noted in (iii) above. Promotions out include Colley (Professor, Huddersfield), Facer (Professor, Bristol), Stronach (Professor, Manchester), Chadderton (RF, East London), Guo (Lecturer, Warwick), Sing (Lecturer, Western Sydney). Allen, Holmes, Jones, Lewin, MacLure, Macrae, Packham, Piper, Solomon and Torrance have held ESRC/AHRC awards in period; Heywood, Lewin, Solomon and Whitton have held EU grants in period; Brown and Schostak undertook research on CPD for the College of Emergency Medicine; Torrance is an Academician of the Academy of Social Science.

MMU supports the Vitae Concordat on research career development, including access to appraisal and support between contracts; staff members on fixed-term contracts become permanent after four years' service. MMU also promotes and monitors equal opportunities closely; the Education return includes staff who have had maternity leave, are part-time, and/or early career researchers.

Faculty staff development funds support staff to gain doctorates (20 current staff registrations; 10 completions in period). ESRI provides the research training and supervision including via our EdD programme. Faculty timetabling also supports bids for 'professionally related research' focussed on staff new to research not registered on the doctoral programme. ESRI funds larger bids for research time to support outstanding work, high quality publications, and build substantial research activity into programme and institutional development.

In addition to research group activity, research culture and development are promoted by:

- international seminars and symposia, including ESRC seminar series: see 'e. Contribution to the discipline' and <http://www.esri.mmu.ac.uk/resactivity/index.php>
- regular faculty seminar series featuring visiting speakers and in-house presentations, see <http://www.esri.mmu.ac.uk/seminars/index.php> ;
- 'away days' and research residentials to explore research interests and identify priorities including planning symposia for conferences and proposals for specific research programme and tender deadlines; these meetings also involve workshops on writing and publication, securing funding, supervision;
- ESRI and staff blogs including provision of extensive electronic resources e.g. <http://www.esriblog.info/>
- research presentation workshops linked to project activities;
- informal 'bag lunch' discussions of emerging research issues and ideas;
- weekly 'drop in' for discussion of current research issues (the 'Friday 4 o'clock slot');
- theory and methodology reading group;
- doctoral student seminars (student-organised) including 'in conversation with' informal lunches with invited members of staff;
- theory and methodology seminars with other MMU departments/Research Institutes (particularly Philosophy, Psychology, Sociology).

A key principle informing the development of the above range of activity is that one-size-does-not-fit-all. Everyone is not expected to attend everything, but rather a range of opportunities are provided to maximise staff and student engagement and development via different forums.

ii. Research students

Research training is based on our MRes and EdD teaching programmes. ESRI was recognised for ESRC '1+3' studentships and had 5 CASE studentships in period. With the creation of institutional level Doctoral Training Centres ESRC no longer recognizes at unit level so we now support 2-3 full-time research studentships per year from our own resources. MMU supports co-funding arrangements with collaborating sponsors and, for example, 3 new full-time studentships started 2013-14 co-funded with the Co-operative College, Manchester Art Gallery and Manchester Communications Academy (linked to BT).

Current enrolments=101=57.5fte; disaggregated awards from REF 4a comprise:

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	EdD	PhD	Total
2008-09	2	1	3
2009-10	2	11	13
2010-11	4	2	6
2011-12	2	6	8
2012-13	3	7	10

Additionally 10 PhDs and 1 EdD were awarded in 2007-08

A key output supporting research training is Somekh & Lewin (2011, 2nd edition), an internationally best-selling text, produced in tandem with MRes development, involving 66 researchers from 35 universities worldwide. Full-time research students have their own fully-equipped workrooms. Students are attached to research groups and benefit from an inclusive and supportive ethos, supervision and mentoring from experienced researchers, involvement in training and capacity building workshops including our Summer Institute in Qualitative Research (SIQR, see below 'e. Contribution to the discipline'). Students have extensive interaction with international visitors and are helped to publish through collaborative writing (eg Barnes & Solomon 2013, Brown et. al. 2013, Chadderton & Torrance 2011, MacLure et.al. 2012, Piper & Cordingly 2009). Students also have access to funds for conference attendance (20+ BERA presentations in period) and publish independently (e.g. Davidge 2013, Fletcher 2013, Healicon 2012, 2013, Mills 2012). Torrance is a member of the ESRC DTC Evaluation Panel (2013-14).

d. Income, infrastructure and facilities

Research income won exceeds £2M from more than 50 research grants with £1.75M spend in period. Grants include 10 from ESRC, 1 from AHRC, 1 from the Norwegian Research Council, 6 from EU and 30+ from charities, government departments, agencies and local authorities. Business sponsors include Barclays, Microsoft and the BBC. Key highlights from our research groups include:

Cultural Studies of Children and Childhood (CSCC):

ESRC 'Becoming a problem: how and why children acquire a reputation as 'naughty' in the earliest years at school (Jones & MacLure, £130K, 2006-8, RES-062-23-0105); ESRC 'Addressing 'problem behaviour' in the early years: an innovative film resource' (Holmes & MacLure, 'Follow-on funding' £30K, 2010-11, RES-189-25-0122); ESRC Seminar Series 'Generating alternative discourses of childhood as a resource for educational policymaking' (Holmes, £18K, 2010-2011, RES-451-26-0948); AHRC 'The secret life of an object: an artist's residency in an early years classroom (MacRae, £25K, 2009-10, AH/H008403/1). Other funding includes Evaluation of the Aiming High Initiative (Jones & Moakes, Manchester City Council, £20K, 2011), a project that sought to develop innovative ways of offering short breaks to children with disabilities and their family; Evaluation of 'Hit the Ground Crawling' (Holmes and Jones, Stockport Sure Start, £20K, 2010- 2011), supporting teenage fathers-to-be; Evaluation of Sure Start outreach workers accessing the 'hard to reach' (Powell & Jones, £120K, 2007 –2012); Evaluation of Styal Prison Mother and Baby Unit (Browne & Holmes, Action for Children, £30K, 2009-10). The group contributed 3 reviews to the Esmeé Fairbairn/Cambridge Primary Review (3 x £3K, 2007-8; Alexander et. al. 2009) and members of CSCC have also been central to the development of the £15M Early Years Professional Status (EYPS) programme sponsored by DfE and Children's Workforce Development Council (CWDC, Barron).

Difference, Diversity and Social Justice (DD&SJ):

ESRC: 'The role of celebrity in young people's classed and gendered aspirations' (Allen, with Mendick Brunel, £210K, 2012-2014 ES/J022942/1); ESRC: 'Hands off sports coaching' (Piper, £80K, 2010-2012, RES-000-22-4156); ESRC: 'Taking Part? Research capacity building in the third sector' (Packham, £335K, 2008-2013, RES-595-24-0010), this project includes 3 CASE studentships; ESRC: 'Impact of 14-19 reforms on career guidance' (Colley & Lewin, £80K, 2008-2009, RES-000-22-2588). Other projects include: Educating for race equality and diversity' (Hick & Roberts, HEA, £15K, 2010-2011); 'Young people and risk taking' (Piper, NESTA, £30K, 2007-2008); Evaluation of the Barclays Spaces for Sport programme (Schostak & Pearce, Barclays Bank, £240K, 2005-2008).

Maths & Science Education (MSE):

'Breaking New Ground In the Science Education Realm (ENGINEER)', Heywood & Solomon, EU, £200K, 2011-2014: this is part of a €2.8M, 11 country, 26 partner, collaborative programme across education departments, museums and schools to investigate and develop the

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use of educational materials for use in museum visits to support Engineering Education in primary schools. Heywood and Solomon are developing and trialling materials for use in museums, primary schools and primary teacher education. 'Maths in teaching practice' (Solomon, Norwegian Research Council, £110K, 2012-2015): Solomon is a visiting professor in Oslo (see 'e' below) and leads a team of 4 researchers in a project focussed on enhancing translation of mathematics pedagogic theory into classroom practice in ITE. 'The effectiveness of CPD for emergency medicine' (Brown & Schostak, College of Emergency Medicine/General Medical Council, £12K, 2007-2009): this produced a very significant report and paper in *Medical Teacher*, Schostak et. al. 2009, 2010 and also led to a PhD for one of the College of Emergency Medicine consultants involved (Kilroy 2011). The group also held an ESRC CASE studentship with Manchester Museum of Science and Industry (Heywood supervising Rowlands, 2008-2012, awarded 2012). Additionally, under *Building Research in Teacher Education (BRiTE)*, Brown and Smith have secured Faculty funding from Knowledge Transfer residues to investigate School Direct (£50K, 2013-15, to employ a new research assistant, Rowley).

Technology, Innovation and Play for Learning (TIPL):

Major EU funding includes: 'Innovative Technologies for an Engaging Classroom' (Lewin & Haldane, EU, £510K, 2010-2014). This is a 26 partner, 18 country programme with a total budget of €12.5M investigating the use of ICT in classrooms across Europe, the aim is to bring about systemic change through adoption of innovative learning activities that exploit existing and emerging technologies. 'Technology Enhanced Language Learning Programme' (Macrory & Lewin, EU, £121K, 2007-2009), a project focussing on primary school language teaching with partners in France and Spain; 'Making Games in Collaboration for Learning' (Whitton, EU, £78K 2012-2014). Additional projects include New Models of Learning Provision for KS3 and 14-19 (Lewin & Whitton, Becta, £140k, 2007-2008), Alternate Reality Games (Whitton, JISC, £102k, 2008-2010), Partners in Learning Evaluation (Somekh & Whitton, Microsoft, £120k, 2006-2008) and 'Learning Lives' (Manchester & Whitton BBC, £20k, 2011-2012). The group also held an ESRC seminar series award on 'Educational Futures' (£15K, 2009-2011, RES-451-26-0744).

Theory, Methodology and Knowledge Production (TMKP):

Most of this group's research income is associated with substantive projects reported above, especially those funded by ESRC, and most activity will be reported under 'e: contribution the discipline'. Additionally, Torrance undertook two evaluative reviews for the ESRC of its investment in Education (2 x £10K, 2007/08, 2008/09) and is a panel member for the 2013/14 Evaluation of ESRC Doctoral Training Centres. Torrance & MacLure produced a consultancy report on the RSA seminar series 'The social brain and the curriculum' (2010).

Research activity is based in a dedicated research centre building including 20 fully equipped offices/project rooms, and a large collegial seminar and study space. Three administrators/secretaries are supported by QR and grant income. The University's central Research and Knowledge Exchange Unit provides support for research bids; induction and training for all research roles; and administration for research students. MMU has excellent libraries and electronic and physical access to all academic libraries in Manchester. ESRI funds all staff presenting papers at national and international conferences; c. 10-20 staff attend BERA each year. Research is also supported and monitored by a Faculty Research Degrees group, including the Faculty Ethics group, reporting to MMU Research Committee.

e. Collaboration and contribution to the discipline or research base

ESRI is a founder member of the *International Centres for Applied Research in Education (ICARE)* with Deakin (Australia), Illinois (USA) and UEA (UK), established in 1999 and ratified by formal memorandum in 2004. The network has been developed and now involves researchers at Charles Sturt University (CSU, Australia), Appalachian State, New York State and Oregon (USA). The network promotes international debate and action on research quality, utility, methodology and ethics through a programme of seminars, conference symposia and journal special issues. Key symposia on these topics with these collaborators have been organised at AERA (2009, 2011, 2012), AARE (2010, 2012), BERA (2008, 2009, 2011, 2012), ICQI (2009, 2010, 2012), NZARE (2010); further details are included below by research group.

ESRI is a partner member of the *International Congress of Qualitative Inquiry (ICQI)*: founder and director: Denzin, Illinois). Members have provided key symposia and workshops for the past 5 years (Brown, Duggan, Holmes, Jones, MacLure, Piper, Torrance). Torrance is on the editorial board of Denzin & Lincoln *Handbook of Qualitative Research* (4th edn 2011, 5th edn

forthcoming 2016). The international *Collaborative Action Research Network* (CARN) is hosted by MMU and jointly co-ordinated by Pearce. Brown and Solomon launched the first *Maths Education and Contemporary Theory (MECT)* conference in Manchester in 2011, with a second conference in 2013. Lewin organised the Computer Assisted Learning conference (CAL) and International Federation of Information Processing conference (IFIP) in Manchester in 2010 and 2011. MacLure is a founder member of an international collaboration of material feminist theorists convened by Lenz-Taguchi, Stockholm, and was keynote presenter to its first conference (Stockholm 2013). Interdisciplinary research is a key element in much of this work e.g. Holmes (ESRC seminar series with sociologists, artists and the Museum of Childhood: childhooddiscourses.wordpress.com/); Allen (ESRC seminar series with Cultural Studies: educationandculture.wordpress.com/); MacRae (AHRC grant with practising artists: secretlifeofobjectssite.wordpress.com/); Brown (exploring the implications of Maths for qualitative research: MECT 2011 and 2013, ICQI 2012).

A key development arising from these links is the establishment of our *Summer Institute in Qualitative Research: putting theory to work (SIQR)* directed by MacLure). This is an intensive week-long lecture and workshop programme attracting c. 150 early career and established researchers from around the world. It focusses on exemplifying the role and use of theory in empirical research. Keynote speakers have included Stephen Ball, Deborah Britzman, Bill Green, David James, Alison Jones, Patti Lather, Neil Mercer, Elizabeth St. Pierre, Linda Tuhiwai Smith. Our research students attend the Summer Institute, chair discussions and present in the workshops. Taken together with our extensive publication and editorial work these activities reflect the global recognition of Education at MMU for world leading theoretical and methodological developments. Highlights from our research groups include:

Cultural Studies of Children and Childhood (CSCC):

The group are leaders in the field of early childhood education, especially with respect to problematizing the concept of children and childhood through the frameworks of poststructuralism, postcolonialism, feminism, arts-informed research and discourse analysis. Eight major international keynotes in period: Jones, Norway 2012, Finland 2012, New Zealand, 2011x3 including the 'Erskine Scholar Lecture' at the University of Canterbury; MacLure, Stirling 2008, NZARE New Zealand 2010, Italian Ministry of Justice, Rome, 2012. Seven major international symposia have been organised in period: BERA 2008 with Cannella, Texas; BERA 2012 with Otterstad, Oslo & Senior, Deakin; AERA 2009 with Cannella; AARE 2010 with Sumsion CSU, Grieshaber QUT, Australia; NZARE 2010 with Duncan, Univ. of Canterbury NZ; Gender & Education 2009 with Grieshaber QUT; ICQI, Illinois 2010, pre-conference workshop led by Holmes, Jones & MacLure. MacLure was an invited workshop speaker Deakin 2010; Jones and MacLure invited presenters to the Early Years Collaborative Network, Charles Sturt University 2012 (involving CSU, QUT and Monash). Jones sits on the editorial boards: *Contemporary Issues in Early Childhood* (editors Yelland & Grieshaber, Australia), *Reconceptualising Educational Research Methodology* (editor Otterstad, Oslo). Jones, Holmes and MacLure are invited members of the International Critical Childhood Policy Collaborative led by Cannella, and Jones and Holmes are International Fellows of the *Velma Schmidt Chair in Early Childhood Studies* (University of Texas). Jones is Visiting Professor II of Early Childhood Education at Oslo and Akershus University College, Norway. Members of CSCC have also contributed to three recent international edited collections in the field: Cannella & Soto 2010, Duncan 2012, Yelland 2010.

Difference, Diversity and Social Justice (DD&SJ):

The group is highly influential in key substantive fields particularly: risk aversion and *in loco parentis* touching behaviour between adults and children (Piper), researching sensitive issues and research ethics (Piper), education, neo-liberalism and radical research (Schostak), race and education (Daza, Hick, Roberts), school disaffection (Bright), youth culture and gender (Allen). The group edits *Power and Education* (Piper) and has produced 9 journal special editions in period, most resulting from specially organised conference symposia: *Discourse*, Schostak, 2012; *Power and Education*, Schostak, 2012, Piper 2012 & 2013; *Sport Education and Society*, Piper 2013; *International Journal of Research and Method in Education*, Piper, 2010; *Qualitative Inquiry*, Bright & Dyke 2013, *Race Ethnicity and Education* Daza 2008, Roberts 2012. The group has organised 10 conferences: Discourse Power Resistance 2008-2013 at various venues including MMU in 2008 and 2009; In Defence of Youth Work, 2012, Batsleer, BERA SIG at MMU; Space, Place & Social Justice, Bright and Dyke 2012, sponsored by the European Educational Research Association at MMU. Schostak presented at University of La Coruna 2009, University of Sao Paulo 2010, 2013

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(as visiting professor) Steno Institute Denmark 2010 and 2011, University of Rennes 2011; and organised conference colloquia/symposia at BERA 2009 & 2011 and ECER 2011. Piper was visiting professor Potchefstroom, South Africa 2009, and has been an invited contributor to 2 ESRC seminar series (Changing Parenting Culture (Kent); Understanding Human Behaviour through Human/Animal Relations (Exeter, Bristol, Reading)). She is co-applicant and key-note speaker (May 2013) for a third (Revisiting Moral Panics, with Cree Edinburgh). Piper is also an invited speaker to a range of policy-informing conferences including Sunday Times Festival of Education (2012) and Battle of Ideas (2013). Schostak works with the Co-operative College in relation to its support for the growing number of co-operative trust schools in the UK supported by 2 fulltime PhD students (Davidge, Dennis). Diverse collaborative national and international links are also evident in other PhD research, eg Women's Aid (Healicon), Manchester Women's Network (Berry), mental health in India (Mills).

Maths and Science Education (MSE):

MMU leads internationally on the theoretical and discursive dimensions of mathematics education. The group has published more articles in *Educational Studies in Mathematics (ESM)* and in the associated Springer book series *Mathematics Education Library (MEL)* than any other institution in the world. There are 11 MMU papers in period in *ESM*, the world's leading mathematics education journal (rest of UK total = 24). There are two books by Brown in *MEL* in period (*Mathematics, Education and Subjectivity*, and *Becoming a Mathematics Teacher*), both reviewed in *ESM* and elsewhere; rest of UK=1). Additionally, Heywood & Parker's (2010) book *The Pedagogy of Physical Science* appears in the parallel Springer science education series (*Contemporary Trends and Issues in Science Education*). Heywood and Parker also have two recent papers in the leading American journal *Science Education* (ISI, 10/216). Solomon's book *Mathematical Literacy* is published by Routledge. Brown & Solomon organised the inaugural invitational conference of *Mathematics Education and Contemporary Theory (MECT 2011)* and the second MECT conference in Manchester 2013. Delegates included major figures from 16 countries: e.g. Skovsmose, Ernest, Sfard, former chair of *PME* Lerman and key journal editors (e.g. *ESM*, *FLM*, *MERJ*, *RME*, *IJPME*). Keynote speakers included Radford (2012 Winner, ICMF Freudenthal Medal, Brown nominated for 2013). The network has published five edited collections in period: Brown et al. (double *ESM* Special Issue 2012), Brown (*The Psychology of Mathematics Education*, Sense, 2008), Solomon et al. (*Mathematical Relationships in Education*: Routledge, 2009), Walshaw (*Unpacking pedagogy: new perspectives for mathematics classrooms*. 2010) and Nolan & de Freitas (*Opening the research text: Critical insights and in(ter)ventions into mathematics education 2008*). Additionally, Brown led a double symposium at the *International Congress of Qualitative Inquiry* in Illinois (2012), derived from the MECT network. Solomon is Visiting Professor II of Mathematics Didactics at Oslo and Akershus University College of Applied Sciences, Norway and Visiting Professor at Loughborough where she co-researches undergraduate mathematics with Croft, publishing in *Gender and Education* and *Studies in Higher Education*. She is editor of *Research in Mathematics Education* and leads a Norwegian Research Council Funded PRAKUT sub-project on the impact of teaching practice on pre-service mathematics teachers. Brown led (with Clarke, Melbourne) on a 12000-word chapter for *Third International Handbook on Mathematics Education*. Pais, recruited from Portugal, has recently completed a post-doctoral scholarship funded by the Portuguese Foundation for Science and Technology. Daza, recruited from Texas, has recently completed a US National Science Foundation (NSF) study on 'Perceived Barriers to Participation in Engineering' based on interdisciplinary NSF grants to investigate 'Hazard Mitigation' and 'Retention in Cohorts of Engineering Students' (NSF 09-598; NSF 11-509).

Technology, Innovation and Play for Learning (TIPL):

Members make a leading contribution in the fields of ICT and schooling (Lewin, Somekh, Emeritus) and Games-based learning (Whitton). Facer (in post 2008-2012) is a leader in the field of Educational Futures directing an ESRC seminar series and writing her definitive book (Facer 2011) while at MMU. Members have built a strong profile in national and European policy arenas and have acted as advisors and contributors to the activities of national and international organisations including DCSF/DfE, JISC, BIS, Creative Partnerships, Becta, TDA, EU and European Schoolnet. Keynote addresses include: Learning Without Frontiers (Facer, London, 2012), International Federation of Information Processing (IFIP, Lewin, Prague 2008), Annual Congress of Games-based Learning (Whitton, Universidad Europea Miguel de Cervantes, Spain,

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2008). The group has strong commercial partnership links with a number of key technology organisations, including Apple, LWF, Promethean, Roland UK. Group members chaired two international conferences hosted in Manchester *CAL: Learning Futures (2011)* and *IFIP conference (2012)*. Members have chaired symposia at ECER (Helsinki 2010, Berlin 2011), BERA (London 2011), European Conference on Games-based Learning (Athens 2011) and have edited special issues in *Computers & Education (2012)* and *Simulation & Gaming (2013)*. The influential *Learning, Media and Technology* journal was led and edited by Lewin, to 2010, and she remains on the editorial board.

Theory, Methodology and Knowledge Production (TMKP):

This group underpins the development of our empirical research. It is highly influential internationally but its work remains firmly grounded in ESRI's overarching commitment to producing high quality applied research and our collective experience as practicing researchers, educators and policy analysts. It is the combination of theoretical innovation disciplined by rigorous empirical investigation which makes the group's work so distinctive. Members have provided keynote lectures to NZARE (MacLure, Torrance 2010) and, as detailed above, have organised 20+ international conferences and symposia in period, with a variety of international collaborators, at AERA, BERA, AARE, NZARE, ECER, ICQI, Gender and Education, the Collaborative Action Research Network (CARN), Reconceptualising Early Childhood Conference and Discourse, Power, Resistance (DPR); producing 20 special issues of journals. Editorial board memberships include *Gender and Education* (Allen); *Sociological Research On-Line* (Allen); *Cultural Studies=Critical Methodologies* (MacLure); *Educational Studies* (Journal of the American Educational Studies Association, Daza), *Reconceptualizing Educational Research Methodology* (Jones); *International Journal of Educational Research* (Torrance); *Educational Research* (Journal of the NFER, Torrance); *International Review of Qualitative Research* (Torrance). Bright is Co-ordinator for Network 19 (Ethnography) of the European Education Research Association. Daza co-chaired the AERA Postcolonial Special Interest Group from 2007-2010. Major outputs include *Qualitative Research Methods in Education* (Sage, 4-volume set, 1680 pp. Torrance ed 2010; reviewed by Dimitriadis in *Qualitative Inquiry* 2011); *Theory and Methods in Social Research* (Lewin & Somekh 2011); *Handbook of Educational Action Research* (Somekh & Noffke 2009); *Reframing Educational Research* (Farnsworth & Solomon 2013); and three books by Brown cited under MSE above. Torrance edits the OU Press Series [Conducting Educational Research](#) (13 titles in print) and is a member of the ESRC NCRM Specialist Panel on Qualitative Methods. He edited a special issue of the *International Review of Qualitative Research* on ESRI's work (6, 3, 2013). Several staff are members of the ESRC Peer Review College and Torrance is a member of the ESRC DTC Evaluation Panel (2013-14). MacLure directs and organises the Summer Institute in Qualitative Research (SIQR), see details above. TMKP also organises video conferences and specialist seminars in collaboration with international partners and collaborators following up material presented at SIQR. These include: [Objects, Spaces and Learning International Symposium](#), with Deakin University 2011; Space, Place and Social Justice (Bright), an international seminar sponsored by BERA/EERA, July 2012; Theory and Methodology in Qualitative Research, pre-BERA international seminar, ESRI, 2-3 Sept. 2012.

The future is challenging for educational research, particularly in England with respect to ITE policy, but educational research is strong at MMU. The scale, scope and quality of our research is exceptional. We have significant research council and EU funding extending into 2014 and beyond with further proposals under consideration. Various symposia are already accepted at AERA and ICQI 2014 and under development for other conferences. We have funded our own investigation of School Direct (2013-15) which will lead to further funding bids and publications on a topic of crucial concern for the sector. We have a proven capacity to sustain world leading research and develop high quality researchers. We remain ambitious and are confident this quality and capacity building will be maintained and developed still further.