Exchanges

The Interdisciplinary Research Journal

Volume 12, Issue 3 (Summer 2025) - Special Issue

Issue Highlights:

- Papers inspired by the International Research Culture Conference (IRCC) 2024
- Insights, case studies & snapshots of current research culture practice & research
- Editorial perceptions, reflections & future directions

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Exchanges: The Interdisciplinary Research Journal

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Exchanges is a scholar-led, peer-reviewed, diamond (non-fee charging) open access, interdisciplinary, online-only journal dedicated to the publication of high-quality work by researchers in all disciplines for a broad scholarly audience. Since 2013, the title has attracted innovative research articles, critical essays and interviews from emerging domain experts and early career researchers globally. The title also publishes scholarly work by practitioner authors and independent scholars.

A Managing Editor-in-Chief based at the University of Warwick oversees development, policy and production, while an international Editorial Board comprised of early career researchers provide advice and practically contribute to editorial work. Associate editors are recruited to participate in producing specific special themed issues. Exchanges usually publishes two issues annually, although additional special themed issues are periodically commissioned in collaboration with other scholars.

Exchanges' major missions are to encourage intellectual exchange and debate across disparate research communities, along with developing academic authorial and editorial expertise. These are achieved through providing a quality assured platform for disseminating research publications for and by explicitly cross-disciplinary audience, alongside ensuring a supportive editorial environment helping authors and editors develop superior academic writing and publishing skills. Achieving enhanced contributor esteem, visibility and recognition within these broader scholarly communities is a further goal.

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UNIVERSITY OF WARWICK

Years in the Reign: Editorial, Volume 12, Part 3

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> *I've seen things you people wouldn't believe. Attack ships on fire off the shoulder of Orion. I watched C-beams glitter in the dark near the Tannhäuser Gate. All those moments will be lost in time, like tears in rain. Time to die.* (**Blade Runner, 1982**).

Introduction

Welcome to the thirty-second edition of *Exchanges: The Interdisciplinary Research Journal*, and our first special issue of the year. As always if you are a new reader, thanks for joining us and read on to learn a little more about the journal. Alternatively, if you're a returning reader welcome back too. In this editorial you will find some editorial insight, advice on how you can contribute to future journal issues, alongside an overview of this one's contents. There's also an update on our various social media channels for continuing conversations outside these pages.

Four seasons in one day

To readers who've come here looking for some sage insights into research culture, my apologies and hearty recommendation to skip on to the next section which details papers drawn from the International Research Culture Conference (IRCC) 2024. Instead, if you'll forgive me the timely indulgence, I wanted to share some insights into what it's been like to helm the *Exchanges* journal these past seven and a half years – for reasons which will soon become abundantly clear.[i]

I was recently conducting some introductory training with a prospective associate editor, always one of the most enjoyable aspects of my role as a Managing Editor-in-Chief. We'd arrived at the conclusion of a lengthy hour or so's discussion and system demonstration, and as customary I was wrapping things up while checking if my future editor had any final questions to ask. Which as it turns out she did, but not as you might suspect about her future editorial work but rather about my own experiences as an *Exchanges*' Chief!

> *What's it like being a chief editor? How many issues are you working on? What's day to day life as an editor actually like?* (**Editor training comments**)

I am lightly paraphrasing here, but in essence my associate editor-to-be was genuinely interested in what my life is like. Or rather, what my professional life *was* like as Chief Editor – for dear readers, I regret to announce that this issue of *Exchanges* is my final one. Now, while I let you dry your eyes for a moment, know that my departure is a moment of celebration rather than sadness, at least from my perspective. I do suspect for some of my IAS (Institute of Advanced Study) colleagues and editorial team members it might feel somewhat more daunting to lose me after all this time. Nevertheless, perhaps you'll allow me the small indulgence of looking back over the past seven and a half years of publication and editorial 'fun'.

I started working on *Exchanges* way back in the pre-pandemic days of early 2018, coming to it fairly fresh off having completed my PhD. Although, having been involved in publication and especially open publication since the mid-2000s it was perhaps less of a shock to the system than you might expect. Unlike the editors who proceeded me though, I had neither studied nor been a research student at Warwick before, being very much an 'outside hire'.[ii] One thing I will always remember from my first day, was having found where to park and the location of my office, and after a morning's general introduction to the IAS and how *Exchanges* related to it, I was taken to lunch by the Institute's Director. Which was where he wrapped up my induction with words to the effect:

> *There you go, that's all you need to know. The journal's yours now. Make of it what you can.* (**Pete Scott, 2018**)

It was at this moment I was both thrilled and terrified by the realisation that I'd been given the rare and splendid opportunity to run with the *Exchanges* portfolio pretty much however I fancied: or at least in a manner which resonated with the IAS' mission, and which measurably improved the journal's standing with the local and wider community.[iii] Or if you prefer, I'd been given more than enough rope with which to professional hang myself if my plans didn't pan out quite as expected. One comfort at least was how the Senior Editor post (as it was originally termed) was a fixed term role for a couple of years or so. Hence, if things hadn't worked out by the end of this time, I could then simply move on to pastures new, place the metaphorical chairs on the tables, close the editorial door behind me as I turned off the lights. I rather hoped it wouldn't come to that, but as was clear to me from day one – this journal needed a *lot* of inspiration and revitalisation, but unlike NASA, failure always *was* an option.

Now, if you have already read my editorial commemorating our 10th anniversary issue (**Johnson, 2023**) there's a grand accounting of our decade of development to that point. So, I don't think there's any need in these pages to reiterate the highs and lows over this time. You will probably notice though in this piece my allusion to a need to 'reinvent and revitalise' (**Ibid: vi**) the journal which was stressed from the outset. This was perhaps, if anything, an understatement to *Exchanges*' needs at the time. I had arrived to helm a journal which lacked to my eyes the sufficient systemisation and professionalisation behind the scenes necessary to thrive, and to grow the title in esteem and visibility. Would that I could claim I brought my myriad of talents to bear and succeeded overnight. There were certainly more than a few tears and terse words along the way in those early days, although rarely if ever from myself. I would probably argue I'm still striving towards some of these aspirational goals even today, as while things are much better than they were at the time, there's *always* something more or new to explore, resolve or revise. I would though proudly, and justifiably, point to the enlightened ethos underlying my editorial team's operations as one major triumph. As are *Exchanges*' operations under a far more organised and systematised regime, and one which is redolent with well-documented professionalised policy, procedure and practice than it was when I began.

Case in point, as I think about passing the baton to a new editorial chief; my 'hand over' notes from the preceding editor were a brief half-page email, with key amongst its advice a suggestion to 'fire' one of the editorial Board as my first act.[iv] How to win friends and influence people on day one! Nevertheless, I will note the advice was not entirely without merit and while I eventually followed it through, it was in a rather more compassionate and discursive mode! Unfortunately, of the work and future issues in preparation, my predecessor offered only a meagre scintilla of information. No notes or email exchanges (hah!) to bring me up to speed with how each paper was developing, or detailed advice on how to best collaborate or inspire each of the small volunteer team of editors who made the journal work. I was in at the proverbial deep end.

Oh, did I mention the next issue was due for publication in three short weeks after I started? Those first few months were challenging. That I continued to come to work rather than running away screaming from this semi-chaotic and information-scarce environment is a testimony either to my personal perspicacity and integrity, or inability to back away from a problem in need of solving. Those of you who know me well, will be aware it is likely a combination of both aspects!

Moreover, added to this informational void was a distinct lack of supporting system documentation, with the only guide to using the Open Journal System (OJS) platform upon which *Exchanges* runs a rather slender and heavily outdated one penned some years earlier. It was also one which lacked any specific reference to the '*Exchanges way*' of publishing and editorial practice or application of policy. Creating the first iteration of an editorial guide which codified how our operations ran, along with insights into using OJS to produce *Exchanges* specifically for me and my editorial team was one of my earliest successes. That, and perhaps rolling out my first issue only 7 weeks later! A later publication than ideal perhaps, but as a part-time employee nothing short of a minor miracle.[v]

Fast forwarding to today, 23 issues later and close to 250 articles published – plus easily that number again which I've overseen which failed to make it to publication – and you begin to get an idea of the scale of the challenge. Especially when, for all *Exchanges*' triumphs, I'm the sole directly employed staff member for the journal.[vi] In terms of minor triumphs I'd also point to the Editors' Handbook which has recently reached its eighth edition, around 100 pages of detailed guidance, policy and procedures to help my editors complete their tasks. I've also mentored, trained and supported over 100 editors and associate editors in this time, so I would hope their experiences on *Exchanges* will continue to pay dividends in their professional lives.

I should like to note how *my* handover notes are already over 5,000 words as I wouldn't want the person succeeding me to have *quite* such a challenging first few months as I experienced. I realise they might wish for a briefer document, but then as a Chief Editor you have to be able to read a lot and swiftly, so it'll be a good way to acclimatise themselves with the role.

However, going back to the original provocations, in an effort to bring me back to the original question: what *has* it been like to run *Exchanges*? Challenging, exciting, frustrating, uplifting and on numerous occasions deeply satisfying...often in equal and wildly contradictory measure. How many issues am I working on? For once, really only the one you hold in your (virtual) hands, although even as I take my coat down off the editorial office peg one final time, there's at least four other special issues and their associated editorial teams I'm working with in various degrees for a few more days at least. Plus, I'm ensuring content is as editorially far along for Volume 13.1's autumn issue as possible even though it won't see publication after my departure, even as I lay the groundwork for the Spring 2026 issue too. Academic publication is after all a slow process, so things need to be in place now for events which won't come to fruition for months if not years in the future.

And the last question: what's my day-to-day life been like – what is the quotidian editorial experience? Well, that's the hardest part to answer because while on most days I'll find myself talking with, supporting or advising editors, authors and reviewers, this is by no means everything I get up to. There's always policy and webpages in need of review and revisions. There's meetings and training to organise and plan for alongside marketing and awareness raising activities needed: ensuring in an arguably saturated 'publication market' *Exchanges* has a sufficient visibility for authors to find us and be persuaded that we're a worthy candidate journal for them. Then there's all the regular social media posts and podcast episodes to plan, write, edit, publish and promote. Plus, unplanned and ad hoc interactions with fellow IAS and Warwick staff and students to enjoy as well as dealing with the occasional crisis, or problem, or contributor challenge. Some of which have, on occasion, necessitated seeking legal advice! Then there's the wider world of occasional meetings, conferences and symposia to attend, as I try to keep myself abreast of what and how the world of academic publishing is evolving, and how we can/should/could evolve *Exchanges* to embrace it. Oh, and did I forget there's that pleasure in stepping atop my editorial soapbox to draft (and revise…and revise again) the editorial for each new issue, and trying to find a topic of interest to write on which might resonate with our readers.

So, does that answer the question of what my daily editorial life *has* been like? Perhaps, suggesting it has been 'varied' is an understatement, although as I type these words I find I can't help but think of paraphrasing the splendid series *Supernatural* to describe it all as: *good times, bad times, end times*. And for me those end times are rapidly approaching, as while there are a few more days left to see out, I will be, suitably, taking my final bow as Chief Editor at the IRCC '25 conference in mid-September. After that, well you'll need to seek me out at the heart of Warwick's publishing ambitions as I head up a year's development of our University Press: a role I can imagine will be no less as challenging, fascinating, frustrating and mind-boggling as this one once was to me.

Ah well, no tears dear readers, for this moment has been (hopefully) prepared for - or at least as much as I could. So, vale one and all, and perhaps we'll meet again in my next incarnation.

Papers

Enough musing on what has past, it is time to look to the future with our special issue's articles. This time we bring you a handful of detailed peer-reviewed pieces, and a longer selection of shorter but no less insightful critical reflections, each drawing on various aspects of the IRCC '24's debate and discussions.

Articles

Our bumper issue begins by airing some clean laundry as **Harriet Richmond**, explores ideas around being *The Creative Researcher.* In her paper, Richmond takes a perspective that research culture is actively constituted within research practices which draws on work from The Public Laundry Project. The author explores how researchers experience and navigate the cultural dimensions of their research praxis, investigated through collage enquiry within professional development workshops. Through these insights Richmond argues how research cultural change cannot be engendered entirely through regulation or frameworks, but requires an 'attractive' component if it is to authentically engage researchers in emerging practices (1).

Samantha Broadhead and **Henry Gonnet** then reflect on the *Creative Dilemmas* they face, focusing their article on how research enabling practitioners can facilitate in making creative art research outputs more openly available to others. The authors highlight the extant tensions in pursuing such endeavours though which can create a range of unique ethical challenges around issues including consent, rights and reuse for such 'non-traditional' research outputs. The authors conclude how greater licence training and awareness for researchers is crucial in achieving desirable outcomes, as too are transparent, effective routes through which authors can achieve 'justice' for their works have been reused in illicit or unethical manners (31).

Explorations into Enabling an Inclusive Research Culture for Higher Education Professional Services Researchers are the central text of **Charlotte Verney** and **Helen Curtis**' article. Acknowledging the expanding and ongoing efforts to enhance research culture, and especially the many ways through which professional services staff enable researchers' efforts, the authors highlight a lack of research into the research endeavours of such individuals. As such, drawing on empirical social research methods, the authors expose how poorly understood and recognised such individuals can be within their institutions, and as such offer routes to redress these inequities (50).

Our final peer-reviewed piece this issue comes from **Giulia Lorenzi** and colleagues who are *Breaking Bad Barriers to Pursuing Research*. In exploring intersectional issues relating to pursuing a research career the article situates its analysis within a framework of the many personal and professional challenges faced by such individuals. Thorough seeking to identify real, alongside potential and perceived barriers to research participation, the authors engaged in survey and focus group work. As a result the authors were able to test the veracity of their own understanding of this realm while drawing some broad conclusions about the direction of travel necessary to overcome or minimise such career obstacles for future scholars (72).

Critical Reflections

Moving to our critical reflective section in our first **Marie Sams**, **Rika Nair** and **Sotaro Kita** offer insights, perceptions and reflections drawing on the experiences of IRCC '24, *One Year On*. The authors note an increased discourse around and advocacy for research culture initiatives, alongside celebrating some of the significant developments in and around the conference. The piece concludes by offering insights into the future of the event, alongside its perceived learning and evolutionary outcomes (98). Readers may find the final article in this issue to be a suitable complementary piece.

Kate Duffy, **Elizabeth Hidson** and **Lesley Deacon** then take us on an engaging and agile exploration of *Facilitating Practice-Led Research Culture in Initial Teacher Training*. The authors draw on debates around research excellence and practitioner-researcher identity, which led to an agile and structured collaboration approach meshing these professional aspects together. This work subsequently led to a successful series of outcomes and insights, whereby facilitated, practice-led initiatives can be seen to benefit both individuals and the institution in terms of development opportunities while establishing a healthy and effective research culture (113).

In our next paper, **Kerry A Bloom** and a host of insightful colleagues offer some fascinating insights into *Coproducing an Academic Career Development Programme to Train Future Leaders in Environment* across multiple institutions. Their multi-institutional experiences have led the authors to perceptions that for such programmes to be successful they require holistically embracing a deliberate, purposeful and focused collaborative and co-productive approach. Bloom et al., spotlight the positive impacts and outcomes on institutional research culture adopting this approach has achieved, and consequently offer lessons to other institutions looking to create collaborative developmental endeavours (133).

Taking as their core text *The Precision Mentorship Programme for Inclusive Researcher Development*, **Elizabeth Morrow** and **Meg Jenson** consider some of the extant challenges and barriers to achieving effective mentoring. Exploring a particular initiative, one which ought to build confidence, enhance research skills alongside supporting robust developmental and funding acquisition ambitions, the authors reflect on the programme's successes, challenges and evaluation. Drawing on the lessons and conclusions from this work they extrapolate as to how this particular framework might be applied on a wider level at other institutions (149).

How a myriad of joint statements and concordats are embraced and offer functional impacts on an institution's research culture journey, forms the core theme of **Megan English** and **Stuart RF King**'s article. In *Mapping Institutional Commitments to External Concordats to Support Meaningful Research Culture Change* the authors consider both the benefits, and administrative burdens embracing such commitments practically creates. The authors explore the practice of embracing the ideals of multiple concordats as well as the impact this had across their institution, especially in how this resonated with their unique local research culture ambitions. As a result, the article offers further reflections on the lessons learned and how they are potentially applicable to other research institution (163).

Victoria Strudwick and **Sotaro Kita** explore the *Warwick PATHWAY Programme* in their joint article, which considers how a positive action preprogramme has helped better facilitate Black researchers' careers. The authors explain how through supporting aspiring researchers from undergraduate through to postdoctoral levels in their professional development aspirations, the programme has created an effective career 'pipeline'. In this way there are longer terms hopes that the programme would also engender a positive multi-level community network wherein members could continue to offer career advice, encouragement and insights to each other over time (175).

Our next paper comes from **Ayten Alibaba**, **Richard Smith** and **Yvette Yitong Wang** who offer perspectives around *Creating an Inclusive Space for Research Conversations*. Taking as their starting point the lacuna between disparate research discourses inside institutions, the authors offer insight into perceptions of an increased conversational 'siloing' within the post-pandemic academy. As such, their project aimed to foster more inclusive research conversations across faculty, professional services, students and other interested parties. Through this effort they conclude they were able to reduce some of the 'structural barriers' to a more inclusive, effective and respectful research culture (186).

These themes also strongly resonate in *From Research to Reach*, where author **Yanyan Li** reflects on her personal experiences in organising an international public engagement festival, achieved during her doctoral studentship. Alongside offering insights into accessible academic-public communications, Li expounds on how creating and facilitating this event altered perspectives related to the societal relevance of her research endeavours. This led the author to conclusions about the importance of a more inclusive and participatory research culture, one where ensuring research is communicated in ways which are valued and can be utilised beyond the walls of academia (**203**).

Rosie Wadman and **Jess Macpherson** arrive next with their article which will likely find a warm reception among their fellow authors! The authors explore how finding *Time to Write* is not a luxury, but a functional necessity for researchers and other staff alike. Drawing on the 'Power Hour of Writing' approach, Wadman and Macpherson sought to create space and time within a semi-structured writing environment for any staff members with writing tasks to complete. As such, they reveal how their titular project progressed with insights and an overview of its practical arrangements. They also demarcate the potential benefits to researcher skill development such a programme can offer (**218**).

Next, **Maryam Masood** and colleagues consider *Enhancing Inter-Cultural Awareness Among International Postgraduate Researchers and their Research Supervisors at Warwick*, drawing on reflections from their project team. With a sizeable proportion of PGR (doctoral) students studying in the UK being international ones, Masood et al., explore the myriad of cultural, language, financial and other pressures which challenge their personal research learning experiences. The author offers insights into work examining how intercultural awareness shapes relationships and experiences for such international PGRs as well as the impacts and responses from their supervisors. Masood and colleagues also reveal their planned expansion of this exploratory work across multiple institutions (**229**).

From an international focus, **Craig Carnegie** and colleagues consider a youth demographic as they bring a multiplicity of voices in exploring *Employability Schemes for Young People in STEM*. The authors explore the development of a successful project, and how the findings from it were cascaded throughout their institution. Crucially, the piece includes personal reflections from individually identified members of staff and the impact such initiates have had on their own perceptions of employability schemes. The article concludes by considering not only the future avenues for exploration but also how such lessons might be adapted or applied to other institutional contexts (**243**).

Finally, we close the issue perhaps most appropriately with a look at *The National Centre for Research Culture at the University of Warwick*, from **Sotaro Kita**, **Victoria Strudwick** and **Marie Sams**. In this piece the authors provide a snapshot of the Centre, its aims, ambitions and a sense of its achievements during its first 18 months of operation (**260**). Readers might find it illuminating to read this piece in tandem with that on page 98 earlier.

As always, we hope our readers find something of interest or stimulation in this varied and interesting collection of work. Our thanks as always to all authors for their contributions.

Calls for Papers

As always, *Exchanges* would like to remind all readers and potential authors of our various other open calls for papers. You might also wish to register for our email newsletter or engage with following our social media to keep up with our very latest announcements and opportunities – you will find the links for these towards the end of this editorial.

Open calls for papers

Exchanges continues to invite manuscript submissions throughout the year on any subject, especially those which can either (a) demonstrate a degree of interdisciplinary thinking or research or (b) are written for a wide-academic audience from within a singular discipline. Hence, while pieces which draw directly or indirectly on interdisciplinary methods, methodologies, praxis and thinking are especially welcome, this is *not* a pre-requisite to be accepted for consideration in our pages.

Additionally, *Exchanges* accepts submissions from researchers, practitioners and independent scholars globally. Manuscripts will be considered from authors at any scholastic level, especially early career researchers, but all pieces must meet the same minimum academic standard to go forward to publication.

See our Selection Policy for more information.

Deadlines: There are **no manuscript submission deadlines** on our open call and submissions will be considered throughout the year. Manuscripts therefore may be submitted for consideration via our online submission portal at any point.

Formats: Manuscripts can be submitted for consideration as traditional **peer-reviewed** research or review article formats, which will undergo a rigorous, double-anonymised external review process. Alternatively, they may be submitted under our **detailed editorially review** formats – briefer works which often are able to transit to publication faster.[vii] Editorially reviewed formats can be especially suitable for first-time authors, or those looking to embrace reflexivity, posit an opinion or share professional insights. It is notable that all article formats receive extensive reader attention and downloads.[viii]

Requirements: Word counts and requirements for all content formats vary and prospective authors are strongly encouraged to review our Author Guidance ahead of submission.[ix] Where an exception to these standards is required, authors should discuss their anticipated manuscript with the Chief Editor ahead of submission. Manuscripts passing our review processes and accepted for publication will subsequently appear in the next available regular issue, normally published in spring and autumn.

Review: All submitted manuscripts undergo initial scoping (suitability and initial quality) and originality checks by the Chief Editor before being accepted for further editorial review consideration. Manuscripts seeking publication as research articles additionally will undergo one or more rounds formal peer-review by two or more suitable anonymised assessors. Editorial decisions on manuscript acceptance are final, although unsuccessful authors are normally encouraged to consider revising their work for later reconsideration by the journal.

Authors: Notably, *Exchanges* has a mission to support the development and dissemination of research by early career and post-graduate researchers (**IAS, 2025**). Consequently, we are especially pleased to receive manuscripts from emerging scholars or first-time authors, although contributions from established and senior scholars are also welcomed.

Further details of our open call requirements can be found online (**Exchanges, 2024a**). Or to begin your submission journey visit:

- exchanges.warwick.ac.uk/index.php/exchanges/submission

Informal approaches

Exchanges, normally via conversations with its Editor-in-Chief, has always welcomed approaches from potential authors to discuss prospective article ideas or concepts. However, abstract submission or formal editorial discussions ahead of a submission are *not* normally a prerequisite, and authors may submit complete manuscripts for consideration without any prior communication.[x] During the submission process authors are encouraged to include a *Note to Editor* outlining the article format or call under which their manuscript is to be considered or any other considerations they wish to bring to my attention.[xi] *Exchanges* regrets we cannot offer extensive feedback, advice or critique on outline manuscripts or text ahead of formal submission and review.

While this is my final issue as Editor-in-Chief of *Exchanges*, I have no doubt that my successor will continue to welcome such approaches – so authors may wish to direct their questions to our general email address. But have no fear, I shall forward on any errant approaches that still come my way!

Author fees

Exchanges is a diamond (or platinum) open-access, scholar-led journal, meaning there are **no fees or charges** for readers and author alike. All published content is made freely available online to readers globally (**Fuchs & Sandoval, 2013; Bosman et al, 2021**). Furthermore, authors retain all rights over their work, granting *Exchanges* first publication rights during submission as a pre-requisite for publication consideration. *Exchanges* is also happy to support translations of our published articles subsequently appearing in other suitable journals, and requests only that a link back to the original piece is incorporated for completeness. Authors may wish to consult *Exchanges'* journal policies for further information on how we handle author contributions (**Exchanges, 2024b**).

Further advice for prospective authors can be found throughout the *Exchanges* and IAS websites (**Exchanges, 2024c, IAS, 2025**), as well as in our editorials, podcast episodes and blog entries.

Forthcoming Issues

The next issue coming from *Exchanges* will be its first under new management – so treat them kindly! I would expect this will be our autumnal issue (V13.1) scheduled for late October, but possibly slipping a little later this year as my successor gets used to our processes.

This issue, I would hope, will be swiftly followed by publication of one of our longer gestating special issues – Sustainability Cultures feels likely from my current perspectives, but, naturally, I could be as surprised as you will be by what actually appears! As always, watch our social media channels or subscribe to our newsletter for more about our future publishing plans for 2025 and beyond.

Acknowledgements

Naturally, as I head for the exit door, I would like to offer a range of thanks to everyone who has contributed positively to making my time on *Exchanges* a productive and successful one. To every editor and associate editor who laboured behind the scenes, through to colleagues in the Institute of Advanced Study and across Warwick for insights and input and of course to all the authors and reviewers – without whom...

It would feel ungracious to run a lengthy list of names here, as I am sure to forget to mention some vital personage, but I would like to single out Abbie Pritchard her invaluable editorial assistance over the past year, and Dr Fiona Fisher for her gracious managerial style throughout my tenure which gave me every opportunity to make something of the journal. A tip of the hat also to Prof Peter Scott for recruiting me in the first place, and Prof Alison Cooley, for her publishing insights as our (relatively) recently appointed IAS Director.

For the purposes of this special issue, I'd like to offer particular thanks to all those associated with the *National Centre for Research Culture* and *International Research Culture Conference* team for their continued collaborations with *Exchanges*.

Finally, I'd like to acknowledge the love and support of my good lady wife, Dr Sarah Johnson, who doubtless spotted the original job advert in the first place (she has a keener eye than myself for such things). My thanks too for Sarah in putting up with my many enthusiastic, loquacious and lengthy diatribes on editorial practices with a grace and good humour that remains amazing after all these years!

Continuing the Conversation

Exchanges has a range of routes, groups and opportunities for keeping abreast of our latest news, developments and calls for papers. As many of these socials are interactive, please do make use of them to engage us in conversation!

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Linked.In:	www.linkedin.com/groups/12162247/
LinkTree:	linktr.ee/exchangesjournal
Newsletter:	www.jiscmail.ac.uk/cgi-bin/wa-jisc.exe?A0=EXCHANGES-ANNOUNCE

The Exchanges Discourse Podcast

The new year has brought a new focus to the podcast. In 2025, alongside inviting on past authors to talk about their papers and work, we've been reaching out to various people doing interesting things in scholarly communications. Hence, we've episodes looking at academic podcasting, early career monographs and the national open monographs scene too. We also have some excellent conversations with authors on there too, and at time of going to press our 75th episode is shaping up to be a little bit different – and celebratory to boot – and should be out in the next few days.

All episodes are free to listen on Spotify for Podcasting, and many other podcasting platforms. You can also find a full listing of past episodes from this year, and all previous ones, on the *Exchanges* website.

exchanges.warwick.ac.uk/index.php/exchanges/podcast

Contacting

Exchanges' Editor-in-Chief has a long tradition of being ready, willing and able to discuss any publication related matters concerning the journal, our community of practice or potential submissions. To contact them it is best to use our general editorial email available at:

exchanges-journal@warwick.ac.uk

Alongside a doctorate in cultural academic publishing practices, Gareth also possesses degrees in biomedical technology, information management and research practice. His varied career includes running regional and national professional bodies, managing academic libraries alongside various applied research roles. He was the interdisciplinary *Exchanges* journal's Editor-in-Chief (Warwick, 2018-2025) and will shortly be taking up a new role leading on development on the University of Warwick Press (UWP). He retains professional interests on power-relationships and evolution of scholarly academic publication practice, within social theory and political economic frameworks and remains a vocal proponent for academic agency through scholar-led publishing. Gareth is a fellow of the Higher Education Academy and also a director of a property management company.

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Endnotes

[i] For a more personal discussion on this, I'd direct your attention to our 75th podcast episode featuring an interview with myself reflecting further on my years in office.

[ii] Full disclosure, I did work in an academic library research role back in the mid-2000s for Warwick, but I'm pretty sure this was immaterial in terms of my appointment to the role.

[iii] I'd argue I've smashed this ambition out of the park, but I'll let others and posterity judge me on this one. 23 issues and in excess of 200 articles published in 89 months, in case anyone (except me) is counting. And that's before we include 75 podcast episodes and numerous associated lectures, workshops and symposia delivered!

[iv] I will carry this secret name to the grave. Feel free to speculate though.

[v] I glanced back at that issue in writing this reflection, and was amused to note how perfunctory my editorial content was, by way of contrast to the grandiloquent style I've adopted in later issues. I'm trying not to acknowledge the numerous formatting non-standardisations which are glaringly apparent to me. There's a reason I have an extensive style guide to aid me today!

[vi] Although, having a few hours a week of administrator time since late 2024 has slightly eased my burdens in some areas, and freed my time to focus on neglected strategic and operational concerns. Thank you Abbie!

[vii] **Editorially Reviewed Formats**: e.g., Critical Reflections, Conversations (interviews) or Book Reviews. As these do not undergo external peer review, but a detailed editorial review and revision process, they are also usually able to be more swiftly published in the journal. While the acceptance rate is higher for these types of material, those which fail to meet our required standards in any respect will be declined and returned to their authors.

[viii] **Top Articles**: This diversity of format interest is frequently reflected in our annual Top Articles list, which appears in the IAS annual report, and on our blog usually in January of each year.

[ix] **Word counts**: For the purposes of considering a submissions' word count, we do not typically include abstracts, references, endnotes or appendences. Submissions slightly over/under our required word count limits will, at the Chief Editor's discretion, still be initially considered for review. However, any significantly in excess will normally be declined and returned with revision guidance to their authors.

[x] **Expressions of Interest**: We do on occasion solicit expressions of interest ahead of submissions for special issues, as promoted on our Announcements page, blog and other social media channels. For regular (open or themed) issue submissions though, authors may submit their manuscripts without any prior contact.

[xi] **Formats**: For more on the formats, word counts and other requirements for any prospective submissions, see: https://exchanges.warwick.ac.uk/index.php/exchanges/guidance#formats

The Creative Researcher: Mapping research culture through collage inquiry

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Abstract

Research culture is often framed as an external and abstract construct, shaped by institutional environments. This article takes a different perspective, arguing that research culture is actively constituted within research practices. Drawing on findings from The Public Laundry Project*, a study funded through the Enhancing Research Culture Fund (ERCF) at the University of Warwick (2023–24), this article examines how researchers experience and navigate the cultural dimensions of their work. Using* collage inquiry*, a creative research method employed in professional development workshops, the study explores how researchers articulate and reflect on their research problems and the broader conditions that shape them. This article aims to contribute to research culture scholarship in two ways. First, it reframes research culture as enmeshed with research practices and researcher identity. This challenges dominant conceptualisations of research culture as primarily institutional or extra-individual. I argue that sustainable shifts in research culture cannot be achieved solely through institutional regulation or external frameworks. Rather, they require an attentiveness to the ways in which culture is lived, enacted, and negotiated within the everyday practices and identities of researchers themselves. Second, the article advances methodological innovation by demonstrating how collage inquiry functions both as an* outward-facing *research method for examining research culture and as an* inward-facing *tool for fostering critical reflection. By documenting the workshop process, this article highlights the potential of arts-based methods to surface the lived experiences of researchers, support interdisciplinary dialogue, and cultivate research environments that embrace uncertainty as a generative force in knowledge production. In doing so, it offers new perspectives on how research culture might be actively shaped through creative, reflexive, and deliberative approaches.*

Keywords: collage inquiry; researcher development; research culture

Introduction

Research culture has been described as a 'fuzzy' (**Causadias *et al.*, 2021: 86**) and 'hazy' (**Casci and Adams, 2020: 1**) concept associated with extra-individual forces (**Lena et al., 2019: 21**). This orientation is understandable, in the context of on-going discussions around how institutional environments and cultures may be assessed in the forthcoming Research Excellence Framework (**UKRI et al., 2025**).

In this article, I propose that scholarly attention should turn towards culture as an active, constitutive element of research practices, and researcher identity, rather than as a context for research practices. I will document the outcomes of a research study, funded through the Enhancing Research Culture Fund (ERCF) at the University of Warwick in 2023-24, entitled: *Research practices as sites of research culture(s): The barriers to, and enablers of, research identified through creative workshops*. The study was inspired by my experience of designing and facilitating professional development workshops for researchers, called: *Creative Methods for Research Thinking and Writing* (CM). The aim of the workshops was to provide opportunities for researchers to interrogate research problems, using collage-making.

The first CM workshops took place in 2022. Researchers' engagement with making in these workshops prompted wide-ranging discussions about some of the challenges they were experiencing with research problem formulation. However, discussions also focused on what I term *problems with research*. This is a deliberately expansive phrase used to describe not only the cultural and contextual factors that shape researcher identities, but that could also be understood to arise from what is defined as 'research culture', to include the deeply personal doubts, values, and beliefs about capability and being that researchers bring to, and develop through, their work. Researchers talked about workload pressures, identity conflicts, imposter phenomenon, career uncertainty and their affective responses to the research process. They also discussed their positionality in the research. Researcher 'personal reflexivity' is a familiar stance for those undertaking qualitative research (**Lichtman, 2014: 33**), but uncommon in the 'hard sciences' (**Jafar, 2018: 323**). Researchers expressed degrees of 'epistemic breakdowns' (I have chosen the term *epistemic uncertainty*), where their previously held understandings of the nature of a problem are unsettled and unresolved (**Mengis et al., 2018: 48**).

As the designer and facilitator of these workshops, I noticed these recurring themes. This 'noticing' (**König et al., 2022**) drew my attention to the lived experiences of researchers, and how these experiences aligned with institutional conversations about research culture. This

prompted the proposal for this study. I refer to the study using a shorthand title: *The Public Laundry Project*, because the creative work produced by participants was printed onto items of clothing and exhibited on a laundry line at the International Research Culture Conference (**National Centre for Research Culture (NCRC) and The University of Warwick, 2024**). The shorthand title draws on the English idiom that warns against 'washing one's dirty linen in public', which implies a reluctance to share private matters openly. Yet the project deliberately resists that caution. The exhibition aimed to bring the messy, hidden dimensions of research practice into public view to both expose and cleanse, to make space, and begin anew. In this sense, the metaphor gestures towards a kind of restorative airing: a process of naming, reflecting, and starting again with clarity and care.

Research questions

The *Public Laundry Project* poses three research questions:

1. What are the barriers to and enablers of researchers and their research?
2. How does culture act in and on researchers and their research?
3. What (if any) is the value of collage inquiry for research thinking about research problems (or problems with research)?

However, I shall show through the findings of the project that my research problem formulation was somewhat reductive, but I will return to this question in the conclusion.

Contribution to research culture scholarship

This article contributes to research culture scholarship in two ways.

I argue that research culture is enmeshed with research practices and researcher identity, and this position contrasts with literature about research culture that is primarily concerned with extra-individual dimensions of culture. As such, I propose that research practice can be described as 'a site of social practice' where '…the character and transformation of social life are intrinsically and decisively rooted in the site where it takes place' (**Schatzki, 2002: xi**). Understanding research culture through this lens provides new perspectives on the relationships between everyday research practices, researcher identity, and research culture.

The second contribution that this article will make is methodological. I will argue that collage inquiry has a dual role as an 'outward-facing' research method to generate data on research culture, and second as an 'inward-facing' tool (**Ayrton, 2020: 1230**) that enables researchers to

critically examine their research practices, functioning as a form of 'ambulatory art practice' (**Cutcher and Irwin, 2017: 117**), fostering slow scholarship (**Karkov, 2019: 3**) While collage inquiry is an established research method, its use in professional development activities is largely absent from the literature. By documenting the CM workshop process, this article contributes to scholarship about researcher development that has emerged over the previous ten years (e.g., see **Evans, 2015**; **Rospigliosi & Bourner, 2019**; **Bromley & Warnock, 2021**)

Because of the dual contributions that the article aims to make, it is anticipated that it will be of interest to two audiences: research enablers and methodologists. Research enablers may be interested in how collage has been used as a reflective tool in professional development. Methodologists may be interested in the specific procedure, and reflective framework for doing collage inquiry.

In the next section, the literature review begins with an evaluation of definitions of research culture. Then, the review will examine collage as an art practice, identifying the specific properties of collage. Finally, I will examine collage as research method in the form of collage inquiry.

Literature Review

Research culture

Policy definitions of research culture are broad, abstract, and somewhat disconnected from researchers' lived experiences. There appear to be four key conceptualisations of research culture in the literature:

1. Institutional environments and cultures.
2. Research integrity, transparency and open access publishing
3. Disciplinary cultures in the context of interdisciplinary teamwork
4. National cultures in the context of international research teams.

The first conceptualisation is concerned with institutional environments and cultures. The Research Excellence Framework 2029 will assess institutional dimensions of 'people, culture, and environment' (**UKRI et al., 2025**) aligning with The Royal Society's oft-quoted definition of research culture (**The Royal Society, 2017**). Some of the primary drivers in these efforts to improve research culture are to counteract 'toxic' workplace environments and job insecurity (**Wellcome Trust, 2020**), with the aim of improving research careers, workplace experience, and inclusivity (**Russell Group, 2021**). However, identifying criteria to fairly assess these aspects remains a challenge, as acknowledged by UKRI and

Research England (**UKRI & Research England, 2023**), but proposals signal a move 'away from assessing individuals and towards assessing institutions, disciplinary groupings and teams' (**UKRI *et al.*, 2025**).

The second, and related conceptualisation is concerned with the cultural impacts of research integrity and open access publishing and open data. The UKRI explicitly associates research culture with ethical conduct, stressing open research as vital to a 'healthy academic environment' (**UKRI & Research England, 2023**). The Coalition for Advancing Research Assessment (CoARA) agreement critiques the 'publish or perish' culture, linking it to poor research practices and barriers to knowledge accessibility, and advocates for 'positive research cultures' that prioritise collaboration and social engagement (**CoARA: Coalition on Advancing Research Assessment, 2022**).

The third definition is concerned with epistemic cultures. This considers how cultural norms in different disciplines shape knowledge production (**Cetina, 2022: 11**). Researchers are socialised into epistemic communities, that privilege ways of knowing and conducting research. However, this can hinder successful collaboration in interdisciplinary research teams (**Tobi & Kampen, 2018: 1210**).

The fourth related definition concerns international research cultures. While international mobility benefits the career progression of researchers (**Wagner et al., 2015**), it may also present cultural challenges between in research teams (**Bagshaw et al., 2007**). This perspective sees culture as embedded in interpersonal dynamics within international teams.

Because definitions of research culture are broad, the approach to theory development in this study is inductive. An interpretive stance means that any or all these dimensions of culture could emerge through the analysis of data generated through the CM workshops.

In the next part of this review, I will review the literature about collage as art form, before summarising the key debates about the use of collage as research method, in the form of collage inquiry.

Collage as an art form

Collage emerged as a fine art practice in the early 20th century, popularised by Cubist artists like Picasso and Braque, who introduced it to the avant-garde in 1912 (**Raaberg, 1998; Hajian, 2022; de Rijke, 2024**) Picasso saw collage as a 'release from representation', that subsequently shaped his relationship with painting (**Hamilton, 1955: 481**). While Cubism is most associated with modern collage, earlier layering

techniques existed in ancient and medieval traditions, including the Japanese and Chinese practice of chine collé (**Hajian, 2022: 96**).

Additionally, vernacular art forms pre-date the modernist turn to collage. For example, in the 18th century, Mary Delany created 'mosaiks'; an early form of botanical illustration that reimagined scientific illustration using collage materials (**Orr, 2019)**, and in the 19th century examples include folk art, greeting cards, and Victorian photocollage (**Butler-Kisber, 2008; Siegel, 2009, 2020; Lutz, 2022; Gorman et al., 2023**).

By the 1930s, 'collage' was widely recognised as an artistic technique involving pasted paper (**Hugnet & Scolari, 1936: 5**). However, others have suggested that texture also plays an important role in collage. Unlike painting, which represents spatial relations, collage *creates* spatial relations through real textures (**Faulkner, 1938: 17**). Commenting on the work of Ernst and Dubuffet, who developed the technique of *frottage* from the French *frotter*, meaning 'to rub' **Lippard** (**1962: 241**), describes how this method animates the surface by transferring the textures of underlying materials using various media. Mid-20th-century accounts describe collage as incorporating 'odds and ends' like rags, buttons, and photographs (**Saltzman, 1952**). Others distinguish 'art collage', comprised of object-based compositions, from pasted-paper forms (**Burke, 1959: 231**). In some cases, object collages are made permanent through other mediums, such as photography (**Holmes-Smith et al., 1956**).

Definitions then expanded to include photomontage, an assemblage of mass-media images, and photo collage, which integrates photographs with non-photographic elements (**Dahlgren, 2018: 27**). The concept of assemblage shares conceptual ground with bricolage, a term introduced by French anthropologist Claude Lévi-Strauss to describe the spontaneous creation of new forms using materials shaped by prior actions. Bricolage has been described as 'a nexus between collage, assemblage, and found objects' (**Kini-Singh, 2023: 49**).

Most recently, environmental concerns have shaped the emergence of 'eco-collage' which uses recycled materials to promote sustainability (**Baker, 2024: 132**). A distinction has also emerged between digital collage, described as an 'ephemeral' virtual composition (**Spielmann, 1999: 138**) and analogue collage, a term used to describe hand-cut work (**Davis, 2008: 247**). Some forms of short-form digital content, such as Instagram Reels, TikTok posts, and YouTube Shorts, also exhibit a collage-like quality in their layering of images, sounds, text, and effects. Their ephemeral and algorithm-driven nature, however, makes them harder to categorise within traditional analogue collage frameworks.

Culshaw (**2019**) employs techniques in collage inquiry where objects are placed rather than fixed or stuck down, raising the question of whether permanence matters in collage-making. Reflecting on my own collage-making, I observe that collages function as biographical artefacts that contain temporal simultaneity (**Author, 2022**). Their permanence brings past experiences into the present moment. As **Muzaini** (**2015**) observes, the process of human forgetting may be confounded by a material environment that prompts a re-emergence of memory. In the context of research thinking and memory, permanence matters. Therefore, I provide the following definition of collage that describes the practices adopted for the CM workshops:

> *Collage is an art form that makes use of a range of materials that may include printed materials, materials bought for the purpose of collage-making or scrap-booking, including textured materials, textual materials, objects and/or fabric. A collage is a new, permanent artefact (albeit an artefact that may also be subject to further cutting, sticking or rearrangement (décollage). The collage is created through attaching or sticking down materials and objects in any dimensional arrangement chosen by its creator. The analogue permanence of the collage matters because it directs the viewer to an act of making that takes place in a particular space and within a particular time. The collage belongs to its creator(s), who decides what happens to the new artefact that has been created, e.g., whether the collage is retained, gifted, discarded, subject to further cutting or assembling, etc.*

Although I have defined my engagement with collage, I also recognise that all forms of collage can be described as a 'semantically-linked family' (**Kjellman-Chapin, 2006: 86**). In the next section, I identify key properties of the collage 'family' and explain why this art form lends itself to generating research data about researchers' lived experiences.

Collage properties

As an art form, collage possesses three core properties that make it particularly rich for the research study. It foregrounds failure; it defamiliarises the familiar through processes of deconstruction and reconstruction; and embraces complexity, employing metaphor and metonymy, enabling multiple concepts to coexist within a single image.

I have previously argued that collage celebrates failure because it:

> *'…draws attention to cracks and imperfections by 'letting the seams show' (**Farago, 2021**)…[It is] Rather like Kintsugi, the Japanese tradition of mending broken pottery by repairing the areas of breakage with gold, we are reminded that failure is something to be*

> *valued and celebrated, that the 'pristine is less beautiful than the broken' (**Price, 2021: 1**). The visible damage is integral to the history of the pot, and a potential source of new knowledge.* (**Richmond, 2022: 150**)

Failure matters because it represents the messy moments where new knowledge emerges (**Schultz & Legg, 2020: 250**). Research assessment cultures emphasise 'outstanding and unique' research achievements that often overshadow the value of 'everyday failures.' (**Wyatt, 2024**). Collage exposes how messy research is, paradoxically situated in a culture where researchers 'feel pressured to hide messiness to 'highlight neatly packaged findings' (**de Rijke, 2024: 304**).

Collage defamiliarises the nature of reality, and how it is known, by bringing together the indexical real i.e., photographs that represent reality; the material real i.e., objects, which exist in themselves; and the embodied real by opening the potential for embodied engagement with materials that can be touched and felt. This juxtaposition of realities points to the process of destruction and construction, prompting us to reconsider the familiar as strange. The resulting collage possesses the materiality and stability of other representational forms yet simultaneously undermines these notions. Furthermore, a collage may also be subject to further cutting up and arrangement into new forms, a process known as 'décollage' (**Kjellman-Chapin, 2006: 86**). In research, this phenomenon is akin to research processes that deconstruct established knowledge to construct new knowledge.

Collage has a narrative quality that emerges through syntagmatic relationships between the elements used in its' creation. The canvas becomes 'an arena in which to act' rather than a space for reproduction (**Schechner, 1968: 53**). Through metaphor and metonymy, collage generates a visual language that enables the expression of something without saying anything at all. I have previously noted that this ambiguity offers safety and sanctuary, whether in the formulation of research problems or in confronting the vulnerabilities associated with problems with research (**Richmond, 2022**). Despite this ambiguity, paradoxically, a feature of collage is that it enables participants to make thoughts 'concrete' (**Butler-Kisber, 2008: 6**). The next part of the review will briefly summarise the method and its' applications.

Collage inquiry

'Collage as inquiry' (**Butler-Kisber, 2008**) is a research method that involves creating collages to explore topics or questions. The method has become established in the past twenty years (**Gorman et al., 2023**). An early example of the use of collage inquiry was in the context of research

exploring learners' experiences of learning (**Butler-Kisber & Borgerson, 1997**). Prior to this, collage inquiry was largely confined to psychotherapeutic contexts where the method was used with clients to support them to articulate or communicate difficult or painful experiences (e.g., **Ratcliffe, 1977; Feld & Hall, 1981; Taylor, 1990**). Most recently, collage inquiry has been used to examine dimensions of the researcher experience, including researcher identity (**Lahman et al., 2021; Li, 2023**), 'scholarly thinking' (**Simmons & Daley, 2013**) and the research process (**Lahman et al., 2020; de Rijke, 2024**) Furthermore, there is emerging literature describing analysis methods for collage (**Culshaw, 2019**). However, there are few examples where a specific procedure for collage inquiry has been documented. Exceptions here are the 'Markus Technique' (**Alnutt, 2013: 157**) and a procedure described by **Farenga** (**2018: 65**).

The brief review of research culture literature has shown that research culture is a broad concept, often defined in abstract extra-individual ways.

The review of collage as an art form and research method, provides a means to explore the lived experiences of researchers. Collage's capacity to embrace failure, defamiliarise the familiar, and employ metaphor makes it particularly suited as a research method, and as a thinking method.

In the next section I describe and evaluate the methodology, and methods used to generate data in this study. This framework was designed for the early CM workshops, using a reflective question framework, that was informed by a reflective framework designed for object elicitation (**Bell, 2013; Richmond, 2018**).

Methodology and Methods

The study adopts an inductive, post-positivist, interpretive methodology, recognising knowledge as socially constructed and shaped by human interpretation. A qualitative research design (**McGregor, 2018**) aligns with this, aiming to credibly represent participants' experiences.

A six-stage collage inquiry process that combines image elicitation, collage-making, paired and group discussion, and reflective writing, was developed to generate data. Participants first selected an image representing their research problem, then created a collage using diverse materials. Participants engaged in reflective writing followed by discussions with peers, which was then followed by further reflective writing to document shifts in understanding.

The final stage involved identifying shared themes and actionable next steps in the wider group. See **Table 1**, for further detail.

Table 1: Collage Inquiry Schedule.

Stage	**Activity**
Reflect upon the research problem by choosing an image(s)	Participants are introduced to the workshop through a presentation about the theoretical context for collage inquiry, as both a research method, and as a *thinking* method. The aim of this is to establish credibility of the method for thinking, but also to introduce a researcher audience to the potential of arts-based methods in research. Participants are asked about their experiences and perceptions of collage. The aim of this is to connect experiences of play with a playful attitude towards creative thinking. Participants are invited to select an image (postcard or printed material) that represents their research problem. In pairs, they share their image and describe its significance. The aim of this step is to 'warm up' participants' engagement with visual thinking.
Create a collage using a range of materials	Participants sift through materials provided (magazines, craft materials) to construct their collage. Participants are encouraged to attend to the concepts they are exploring and how aesthetic properties (colour, texture, shape) reflect the problem. Participants are provided with imagery representative of a range of disciplines, i.e., back copies of 'Physics Today' and 'Your Health' magazines, alongside lifestyle magazines. Postcard collections have included Penguin book covers, botanical and anatomical postcards.
Individual reflective writing	Participants respond to a reflective question framework: • What do you see in your collage? Describe it in as much detail as possible. • What do you feel when you look carefully at your collage? • What is the research problem (or 'problems with research') that your collage explores? • How does your collage represent or explore this problem? • What key decisions did you make in the process of creating your collage? (These could be conceptual or aesthetic choices.) • What are the outcomes for you of engaging in this activity?

Stage	Activity
Paired discussion activity	Participants share their collages and written reflections with a partner. They discuss any surprises, insights, or emerging ideas from the collage-making process.
Individual reflective writing	Participants consider new perspectives that emerged through talking about their collage, and the problem it represents: • How has your understanding of your research problem shifted? • What new insights, questions, or ideas have emerged? • Did the discussion reveal anything you hadn't previously considered?
Group discussion	Participants asked to identify actions and next steps for their research, arising from their insights.

Sampling

A non-probability, convenience sampling approach was used to generate exploratory data. Two groups were recruited. Group A comprises of three individuals from different CW workshops. These participants created individual collages. Group B comprises of twenty-two early-career researchers of different nationalities and disciplines, working together in interdisciplinary teams (five teams of four), producing group collages.

Ethical considerations

Three ethical issues were addressed in this study: my positionality (as workshop facilitator and researcher); mitigations for participants who may experience distress (given the nature of some of the *problems with research* highlighted in previous workshops); and copyright and creative artefacts.

As both workshop facilitator and researcher, I analysed only written reflections, not the collages themselves. There were two reasons for this. First this enabled me to focus on my primary duty which was to facilitate the workshop. Secondly, it was important that the workshop activities provide direct benefit to researchers, engaging them in the process of inquiry rather than positioning them *as* objects of inquiry. This stance recognises some of concerns associated with short-term funded research culture projects that may perpetuate issues of inequality by requiring additional labour from groups who are already marginalised within higher education (**Reyes, 2022**).

Collage can surface personal experiences, potentially triggering distress. Olson (**2023**) suggests that ethics review processes should closely examine research where there is a strong potential to cause distress or

trauma. However, she argues that it is important not to conflate this with research where an expression of emotion can be an appropriate response to a set of circumstances, and an important aspect of human decision-making and understanding. Given the issues raised previously by workshop participants, support mechanisms were in place to safeguard participants. These included emphasising to participants that they only share what they feel comfortable sharing, permission to leave the session without explanation (but a request that they follow up with a communication if requiring further support), referral information for counselling and coaching support.

Interestingly, no participants in this study expressed resistance or discomfort with the collage-making process. This may reflect a degree of self-selection among those who chose to take part. In earlier workshops, I learned that explaining the rationale behind the method and emphasising its value as a reflective and playful thinking space rather than an artistic activity helped ease any anxieties about creativity.

Finally, participants were informed of ownership rights via consent forms, ensuring agency over publication, exhibition, reproduction, and withdrawal. Group collages could be withdrawn if any team member opted out of the study. Participants could withdraw from the study within four weeks of engaging in a CM workshop.

Data analysis

Analysis focuses on participants' written reflections, following the systematic phases for thematic analysis described by (**Nowell et al., 2017: 4**). Participant written reflections offer insight into how they engaged with the creative process and constructed meaning. I explained earlier that the collages were not analysed, because interpreting them independently risks misrepresentation because of collage's polysemic nature (**Alnutt, 2013: 157**).

Findings

In this part of the article, I will first analyse the written reflections of group A (individually created collages), before analysing the written reflections of group B (group-created collages).

Figure 1: The Public Laundry Exhibition, September 2024
(Source: Author created photograph).

Group A: Individually generated collages

The thematic analysis of written reflections produced by group A, identified four themes; epistemic uncertainty, researcher positionality, affective dimensions of research, and the relationship between visual and conceptual thinking.

The term *epistemic uncertainty* describes the tension between researchers being shaped by disciplinary norms while simultaneously wanting to move beyond them. Collage-making highlighted these tensions. One participant expresses nostalgia for history versus its critical potential; another explores the rules imposed by a discipline and how this constrains their thinking; and another expresses frustration with the small-scale impact of research in the context of seemingly vast global challenges like climate change. Participants express how their collages physically represented these tensions through colour, texture, and spatial arrangements. One participant describes using structured forms in one corner before deliberately breaking rules as they worked across the collage, visually representing the tensions between structure in the discipline and creativity required for innovative research and teaching:

> *The collage explores challenging myself about the rules I follow/live by/do my research/obeying. How can I release myself from the rigid way of thinking? It explores this problem by being my structured self (in the top-right corner) and then as I worked down to the bottom left-hand corner I made choices that go against 'the rules' (It has to be pretty, look good, be conservative, mustn't be tacky, look neat etc.). I*

was allowing myself to break the rules and not worry about what other people thought. (**Participant insight**)

Figure 2: Participant created collage. (Author created photograph).

Vaughan (**2005: 8**) describes collage as a 'borderlands epistemology' with the potential to hold multiple perspectives while foregrounding non-dominant ways of knowing. It appears that some of the participants grappled with a reflexivity paradox: articulating their research problems,

did not necessarily provide a way forward, but collage provides a space to explore these contradictions. For example, one participant writes:

> *I realise that this is an (unresolved) problem which requires continuing reflection but which cannot be easily solved…so perhaps a re-evaluation of the problem…* (**Participant comment**)

Another participant writes that they can 'see the problem more clearly' but they do not feel able 'to visualise the way that we can tackle the problem'.

The term 'positionality' refers to an individual's world view and the position they adopt about a research task and its' wider context (**Darwin Holmes, 2020**) One participant writes about their realisation of the connection between the researcher's biography, and their research problem:

> *At the top centre of the collage there is a picture of half a record and two faces (which I see as female) and the words 'two' and 'limited'…it is a really important part of my current research project in which I position 'me' centrally.* (**Participant Comment**)

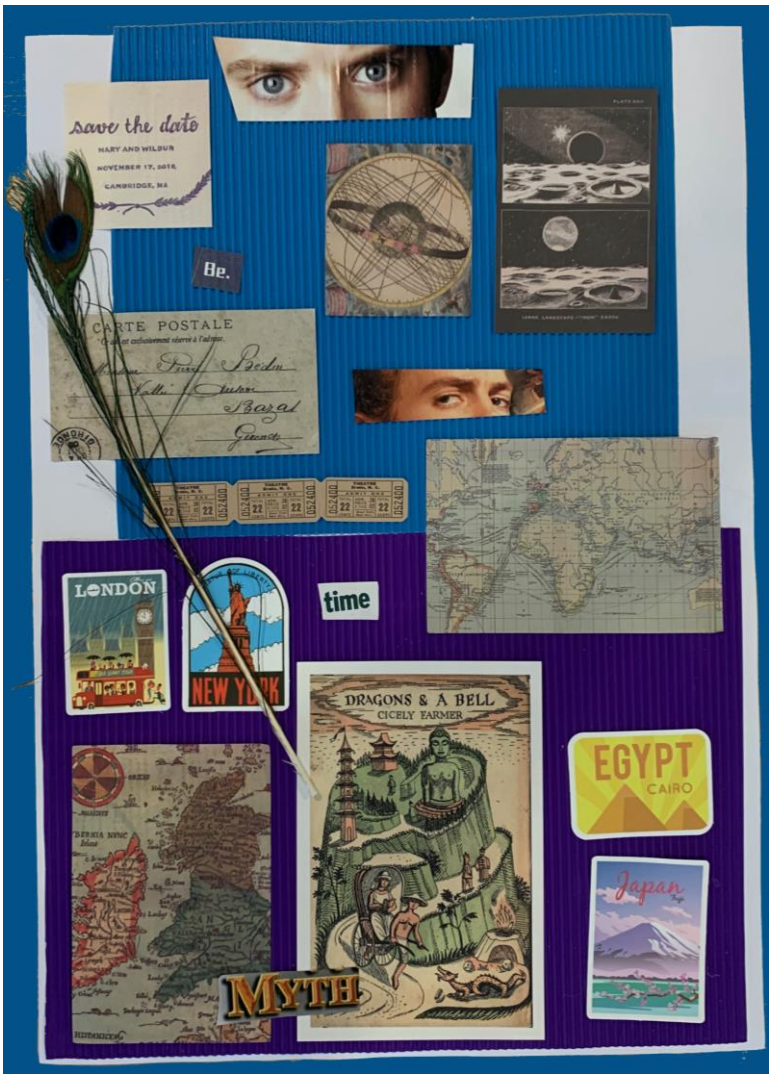
Figure 3: Participant generated collage. (Author created photograph).

Another participant recognises that they have unconsciously drawn parallels between self and the problem they are navigating, describing the collage as representing 'the two halves of me stuck on a piece of paper…'.

Written accounts expressed a range of emotions, elicited through the collage-making process, for example, pleasure, happiness, sadness, frustration and feeling overwhelmed. One participant connected engagement with the collage with feelings about the various dimensions of the research problem they were grappling with:

> *I feel a kind of nostalgia, provoked by some of the historical images and a sense of curiosity. I also feel, to some extent, uplifted by the planetary images in the top right-hand corner. I feel pleasure at having been creative and intrigued by the combination/juxtaposition of words: myth – time - be. I'm happy with the process of the eyes, not so happy about the way it shows to me I'm nostalgic about history, since my intention was to show its forward-looking potential!* (**Participant Comment**)

Figure 4: Participant generated collage. (Author created photograph).



Collage-making appears to prompt engagement with affective dimensions of research and being a researcher. Loughran and Mannay (**2018: 3**) refer to the phenomenon of the 'emotional turn' in social science research, that recognises how emotion operates in knowledge-formation in these disciplines. However, the written accounts of both individual (and group generated collages) are threaded through with expressions of emotion about the research process, and so there may be scope to explore the role of emotions in the doing of research, in more depth.

Each participant acknowledges how visual representation contributes to the way they conceptualise their research. For example, using spatial relations in the collage to represent opposing beliefs, or visually articulating different epistemologies, using contrasting colours and materials. Creative choices appear to assist in helping researchers reframe their research questions, with collage playing a generative role in thinking. However, the participants all commented on how they struggled with translating their visual insights into words:

> *I was surprised how I found the research question easier to explain in words and how difficult I found explaining and describing my collage in words.* (**Participant Comment**)

Another participant writes about the challenge of getting into a creative flow, saying 'I kind of knew I was not letting creative juices flow enough' highlighting that visual representation may be unfamiliar to those more familiar with written forms of expression.

Collage emerges as an important tool for critical reflection, exploring positionality and developing awareness of affective responses to the research process. Participants shared a common observation about collage, that is not merely a representation of research but a way of thinking through it. Participants identified collage as a valuable research tool with tangible applications. One of the participants plans to integrate collage into their teaching, and another envisions adopting it to open the chapters of a book, or as a method for 'organising thoughts'. Participants express the value in in dedicating time and space for stepping back and reflecting on their research.

I noted earlier in this review that policy definitions frame research culture in institutional, ethical, epistemic, and international terms, but they often feel abstract and disconnected from researchers' lived experiences. For the participants in this study, collage has surfaced different cultural dimensions of research and being a researcher.

Group B: Group generated collage

The analysis of written reflections from group-generated collages reveals similarities and differences compared to the reflections of individual researchers. For example, many of these written accounts observe epistemic tensions between team members, rather than internal debates about the nature of knowledge. Similarly, these written accounts attend to the affective dimensions in research, but from a team-based perspective, with accounts expressing emotion arising from group collaboration and accomplishments:

> *I feel happy and it gives me a sense of satisfaction. The collage reflects coordination and good teamwork and effort. It shows our vision come to life!*
>
> *It connected us a lot and we all smiled when we discussed this experience :-)* (**Participant Comments**)

It is important to note that the research teams were engaged in the same topic of water security and comprised multi-disciplinary teams with varying research interests, and this may explain why researcher positionality was less of concern in these written reflections. The groups were much more focused on group cohesion and negotiation. However, the collaborative nature of group collages, produced new insights into the cultural dimensions of team dynamics, and consensus-building in interdisciplinary teams, and the analysis of group reflections will focus on these aspects.

Figure 5: Figure 5: Group generated collage (Author created photograph).

Participants' written reflections identify the challenges experienced by them of integrating different cultural and disciplinary perspectives and approaches. One participant writes that making a collage emphasised the 'Importance of negotiation and consensus in a multi-disciplinary team'. Another participant reflects that 'The collage-making process was also a good way to bond and establish team cohesion'. Another participant draws parallels between the sometimes-messy process of collage making and team cohesion, writing:

> *I feel fascinated by the 'un-coordinated coordination' of colours, themes and the set of patterns to be addressed. Un-coordinated means random materials. 'Coordination' means team coordination and cohesion.* (**Participant Comments**)

Similarly, another participant observes that the collage provided a focus for negotiation, suggesting that '…our [group's] ideas were transformed through making the collage…'.

However, for some, the interdisciplinary teamwork was challenging. For example, one participant reflects on their approach to communication in the group, suggesting that 'I need to work more on myself on explaining my thoughts'. Another participant wrote about the need for their group to be given more time for the collage-making activity, commenting that:

> *We are still unsure about common research questions…we realise we need more focused time to discuss… to find common ground because sharing how we interpret the collage leads to somewhat richer individual expression and understanding.* (**Participant Comments**)

Mengis et al. (**2018: 597**) suggest that researchers often draw upon tacit disciplinary knowledge in interdisciplinary teams, and the absence of dialogue between team-members can prevent 'knowledge integration'. They define dialogue as 'simply mentioning and displaying knowledge'. From my observations of the group work in action, the joint task of making creates the conditions for a rich, energising (and sometimes challenging) dialogue amongst team-members as they work with one another to make sense of the world and problems represented in the collage, suggesting that the method is effective for interdisciplinary research.

Participant written reflections acknowledge the role of collage in conceptualising complex research topics. For example, a participant writes that the activity had enabled the group to 'Include different perspectives on a single issue…simplifying what would otherwise be a complex issue'. An interesting phenomenon of collages with the group-making exercise is that they had all realised the complexity of their topics, through depictions of stakeholders in research. The written

reflections contained several references to this, for example: that collage-making enabled 'simplification of problems through visualisation' or simplified 'what would otherwise be a complex issue', with one participant stating that the activity '…helped me/us ideate concretely and succinctly what the research problem is'. A particular benefit that is highlighted in several accounts is collage's ability to 'physically represent the problem'. This is realised in the collages through the depiction of communities and individuals that are directly impacted by issues of water security, alongside specific examples of flora and fauna. This visual representation was identified in many written accounts as representing an important call to action in research:

> *I feel sadness that this activity has made this problem 'real', '…it [the collage] is real and the project will be real*
>
> *Looking at the collage, I feel the need of immediate action to address something that is real, that is happening now…* (**Participant Comments**)

de Rijke (**2024: 301**) proposes that only multimodal research can do justice to complexities in research. She proposes that collage fosters pluralistic thinking. I propose that collage has a quality akin to pressing the 'google earth' button, enabling one to zoom out to hold a research problem in all its' complexity, whilst providing the opportunity to zoom in on how the problem impacts on 'real' individuals and communities. As one participant observes 'I see all the jigsaw pieces in the collage and how all these elements are connected and interrelated'.

Figure 6: Group generated collage (Author created photograph).

The findings from the thematic analysis of participant written reflections, reveal insights into the cultural dimensions of research.

Epistemic uncertainties are expressed in both participant groups, with researchers acknowledging how their disciplines enable and constrain their thinking or shape their experiences of working in interdisciplinary teams. Researcher positionality emerges as a core concern for individual participants, exploring how their values, beliefs and experiences shape their approach and understanding of research problems. This is not entirely unexpected as one might expect the process of making an individual collage to involve a greater degree of introspective reflection,

with group generated collages reflecting negotiated and shared concerns of collaborative research.

In group reflections, themes of collaboration, decision-making, and negotiation take precedence. The collage making process became a microcosm of research collaboration, requiring negotiation, consensus-building, and the balancing of different perspectives. In group contexts, the findings suggest that visual methodologies can facilitate interdisciplinary dialogue, surfacing implicit assumptions and helping researchers navigate complexity. However, for some, this was a challenging process that requires time and space for full engagement.

Across both groups of participants, the written reflections note how collage making helps them step back from habitual ways of thinking, creating space for critical reflection. The process enables researchers to see their work differently, reframe questions, and explore unspoken tensions, that may be overlooked in conventional research practices.

The findings reinforce the argument that arts-based methods could contribute towards research cultures that value reflexivity, interdisciplinarity, and inclusive knowledge production. Arts-based methods in researcher professional development may have a role to play in shaping research culture itself, by fostering slow deliberative environments for research exploration, and team research.

Conclusion

This Public Laundry Project has shown that research problems are sites where aspects of research culture are enacted and embedded in research practices. Furthermore, this study contributes to methodological innovation in researcher development, demonstrating that collage inquiry can function as both an 'outward-facing' research method and an 'inward-facing tool' (**Ayrton, 2020: 1230**) for professional reflection.

As a research method, collage inquiry has shown the ways in which researchers grapple with the structural, epistemic, and emotional dimensions of their work. The qualities of collage-as-art form, namely; recognition of failure, the foregrounding of reality through deconstruction and reconstruction, and narrative qualities, enables researchers to grapple with the unknown and the complexity associated with this position:

> *…the potential of collage for thinking synecdochically in reciprocal loops makes possible nuanced appreciation of where research emphasis actually lies, at the heart of the researcher's multimodal understanding.* (**de Rijke, 2024: 308**)

Therefore, collage is a reflexive tool that enables researchers to visualise, question, and reframe the problems they encounter in their work, as well as a means of fostering interdisciplinary dialogue. Future work could investigate how other creative and arts-based methods could be used in researcher development and interdisciplinary team development. Additionally, there is scope for developing structured approaches to collage analysis, refining how visual data generated through these methods can contribute to broader research culture discourse. There were two areas for development in this study. First, the data generated from Group A was limited and so further research with individual researchers is needed to explore whether the findings of this study are robust. The second restriction in this study is that the collages produced by participants were not subject to a visual analysis because my dual role as workshop facilitator and principal investigator, prevented opportunities for conversations for interviews about their work. I would anticipate that careful consideration of these artefacts, in conversation with researchers would yield further insights.

My final observation is a personal one, in that I have become aware that the findings turn a meta lens on the research questions I formulated at the start of this study, revealing the limitations of my own reductive thinking when attempting to define the aspects of research culture that enable or constrain researchers. Rather than a simple binary of enablers and barriers, the findings indicate that dwelling in a state of 'not knowing' is an important part of the research process. Uncertainty can feel discomforting but creates the conditions for deeper reflection and intellectual risk-taking. Therefore, higher education institutions (HEIs) might enhance research culture by fostering spaces for researchers to engage with open-ended, deliberative thinking. This indicates the potential of arts-based methods in creating a 'slow scholarship' space (**Karkov, 2019**), where researchers can step back from metric-driven pressures to engage in deep, reflexive inquiry.

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List of Images

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Figure 2: Participant created collage (Author created photograph).

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Figure 4: Participant generated collage (Author created photograph).

Figure 5: Group generated collage (Author created photograph).

Figure 6: Group generated collage (Author created photograph).

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Creative Dilemmas: Balancing open access and integrity

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Abstract

This article reflects on two research enabling practitioners' (REPs) experiences related to making creative research outputs open. The REPs operate within a small specialist institution that is a research organisation (RO) focusing on the creative arts where open research is an embedded part of the RO's research culture. Many of the RO's academics are practice-based researchers whose research is disseminated through non-traditional output types such as artefacts, exhibitions, designs and videos.

However, there are tensions when making creative outputs open that can lead to ethical dilemmas faced by REPs and researchers, including issues related to informed consent, intellectual property and reuse of the research. These tensions are illustrated by examining three examples of creative outputs where issues have arisen where the inter-relationships of open research, ethics and integrity are explored through vignettes.

The findings of this article recommend continued training for researchers about the use of licences for creative works. Another recommendation calls for inclusive and transparent processes that support researchers in gaining justice when the intellectual property from their open access research outputs has been reused in a manner which contradicts the principles of research integrity.

Keywords: creative outputs; practice-research; small specialist; open access; research ethics and integrity

Introduction

This article draws upon two research enabling practitioners' (REPs) experiences related to making creative research outputs open. The REPs operate within a small specialist institution that is a research organisation (RO) focusing on the creative arts. The RO is one of 67 members of GuildHE which is a recognised representative body of universities, university colleges, further education colleges and specialist institutions in the UK (**GuildHE, 2025**). Many of the RO's academics are practice-based researchers who produce creative outputs such as artefacts, exhibitions, creative projects, designs, compositions and videos. These researchers undertake a systematic research process where the outcomes are expressed and disseminated through creative outputs that might not be text-based, as they contain visual, tactile, auditory and other sensory forms. Some of these outputs are based on the researchers' individual intellectual property, especially if the corresponding project did not receive external funding.

The RO has an Open Research Policy that addresses both outputs and research data that supports the Concordat on Open Research Data (**UKRI, 2016**). Alongside the Open Research Policy is an Ethics Policy that promotes ethical practice and espouses the five tenets of research integrity: honesty, rigour, transparency and open communication, care and respect and accountability, as described in the Concordat to Support Research Integrity (**Universities UK, 2019**). These policies complement each other, with research and its management conducted according to these underpinning principles. The RO's researchers are supported in making their work open and informed by ethical practice, through training programmes and where appropriate one-to-one support (**Leeds Arts University, 2024**).

Despite embedding open research and research integrity into the policies, procedures and training that contribute towards the RO's research culture, there remain tensions when making creative outputs open (**Bulley & Şahin, 2021**) and this leads to ethical dilemmas experienced by the REPs and the researchers. This is often when the intention to make work open leads to ethical risks that impacts the researchers and participants. These include issues surrounding informed consent, intellectual property, and the reuse of the research data. These dilemmas are significant although not representative of the majority of outputs, however, these issues can have an impact on the RO, the discipline, and the individual. It is important to investigate these issues and identify improvements to practice ensuring that research, particularly when it is publicly funded, can be trusted. Those who rely on research should be confident that both the work and the conditions under which it is produced are honest, fair and ethical.

Due to the nature of the RO and its researchers, at the time of writing (8 January 2025), 52.55% of the 428 items on the Institutional repository are creative outputs and 93.5% of these are openly accessible. 100% of the 86 exhibition outputs have been made open. The licences used when depositing the outputs are currently 47% CC BY (credit must be given to the creator), 30% CC BY-NC (credit must have been given to the creator, only non-commercial uses of the work are permitted), 23% CC BY-NC-ND (credit must have been given to the creator, only non-commercial uses of the work are permitted, and no derivatives or adaptations can be made) (**Creative Commons, 2025**).

In order to explore these tensions more fully, a practice-research project has been undertaken that draws on the REPs' experiences of ethical dilemmas that have become apparent when making creative outputs open. Insights from this work are communicated through a series of vignettes: a story or scenario that exemplifies a dilemma that has originated from professional practice. The article discusses three vignettes, named: 'the painter', 'the film-maker', and 'the photographer'. The findings of this project recommends that additional training is necessary for researchers to understand the benefits and challenges associated with making creative work open under particular Creative Commons licences. We also propose that the wider research sector should work together to ensure researchers are in a position to seek justice when their intellectual property is misappropriated by a third party.

Context

Open Access (OA) was originally conceptualised by the Budapest Open Access Initiative as a means of distributing peer-reviewed journal literature in a manner which provides free and unrestricted access to all scientists, scholars, teachers, students, and other curious minds (**Budapest Open Access Initiative, 2002**). A point of note is that not all researchers identify as being a scientist, although often the two roles are conflated. The idea was that this would mean researchers anywhere in the world could retrieve, read and use the work of others without barriers and that the public, who fund the research through taxes, could access and read it without facing paywalls (**Eve, 2014**). In the 22-years which have followed its creation, the idea of OA now resonates very differently between communities of practice and has evolved to the point where the original proposition no longer reflects the open research currently available through online repositories (**Moore, 2018**). Broadly speaking, OA still refers to the removal of price and permission restrictions to research. However, it now includes a diverse range of research outcomes and information created during the research process. For instance, in the arts

there are many researchers who produce creative outputs, such as artefacts, exhibitions and videos. These outputs are typically derived from arts-based or practice-based processes of investigation, generating new knowledge in the form of creative outcomes, which are then disseminated through platforms such as exhibitions, performances, and concerts (**REF, 2021**) with outputs documented and archived on repositories. Additionally, in the UK, there is an ever-increasing impetus to make the data generated during research process 'as open as possible and as closed as necessary' in-line with the FAIR data principles (**European Commission, 2016: 4**). The Concordat on Open Research Data defines research data as 'evidence that underpins the answer to the research question, and can be used to validate findings' (**UKRI, 2016: 3**). In the case of arts practice-research, examples of research data are sound recordings, score drafts, storyboards, or sketchbooks (**Bulley & Şahin, 2021**). Data such as this provides access to information instrumental to arts-based methodologies and the complex narratives underpinning arts research outputs (**Barker, 2024; UKRN, 2024**). Although OA in the arts is more nascent and slower to grow than in subjects falling under the banner of science it is no less important and beneficial to society. In the case of the sciences, OA can help to accelerate the development of new medicines and useful technologies. In the case of the arts and humanities, it can mean enriched education, politics, compassion, imagination and understanding (**Eve, 2014**).

There has also been a significant scholar-led effort in recent years to support the recognition of practice-research. In 2021, the Practice Research Advisory Group (PRAG) developed a report which highlights the importance of practice-research, as well as addressing the challenges faced by researchers whose outputs are seen as non-traditional. The report draws together current thinking relating to practice-research in all its diversity, providing recommendations to practice-researchers and the ROs who support them (**Bulley & Şahin, 2021**). The report stresses that practice-research has a 'history stretching as far back as the earliest human experiments, as a method of discovering and sharing new findings about the world that surrounds us' (**Bulley & Şahin, 2021: 1**).

Research in the UK is funded by a dual-funding system, with funding for research derived from two main routes: Quality Research (QR) block grant funding to Higher Education Institutions (HEIs) arising from the Research Excellence Framework (REF), and project specific funding from Research Councils (**UKRI, 2023**). The REF is the UK's system for assessing the quality of research at UK HEIs, which informs the allocation of £2 billion per year of public funding for university research (**REF, 2025**). There are four REF panels that assess this research (panels A, B, C, and D). Research in the arts is assessed in Units of Assessment (UoA) under panel D. Despite this

framework for the assessment and funding of arts research, the language used in many UK research policies (such as the Concordat to Support Research Integrity and the Concordat on Open Research Data) is yet to align with the work of arts researchers. For instance, the Concordat on Open Research Data maintains that its tenets apply to all fields of research, and that the commitments it outlines are relevant to all disciplines in which research is undertaken, and yet it uses the term 'Open Science' to describe research, and the term 'data' itself does not translate well to all discipline areas (**UKRI, 2016**). Similarly, UK organisations set up to support ROs in providing research services appear to some arts researchers to have a science-oriented perspective and use of language. Significant translation work of language used needs to be undertaken by REPs at arts ROs for such ideas and policies to be palatable to arts researchers. It is equally important that arts REPs participate in discussions externally to advocate for recognition of the epistemic diversity of those engaging in open research practices, and to ensure that the voices of arts researchers are being heard. This is beginning to be addressed at organisations such as the UK Reproducibility Network (UKRN) and the Association of Research Managers and Administrators (ARMA) where special interest groups and inclusive practices have started to take root and diverse research practices recognised (**ARMA, 2025; UKRN, 2025; Hooper et al., 2024**). The vignettes do not address Artificial Intelligence (AI) issues as they have not yet arisen in relation to research undertaken in this RO. However, it will become important for REPs to think about a means of protecting creative practice researcher's outputs with regards to copyright and licensing infringement by AI software. Outside of academia in the UK there has been a recent campaign led by artists such as Paul McCartney and Elton John against amendments to the UK Data (Use and Access) Bill, which would allow for AI companies to legally use copyrighted works to train Large Language Models (LLMs) without permission (**Courea & Milmo, 2025**). These issues are yet to be formally addressed by UK research policy makers but are likely to present issues for creative researchers in the future as LLMs do not comply with open license terms and do not credit creators, which is a cornerstone of open licensing (**Walsh, 2023; Creative Commons, 2025**).

This article considers dilemmas which have occurred at a small specialist arts RO in the UK, where the research culture aims to respond to the wider research policy landscape. The RO has a small group of twenty-seven researchers, two REPs and two research fellows. The RO is in receipt of QR block grant funding from REF, which is used to fund the research at the institution. The majority of research projects at the RO do not receive any external funding from the funding councils. OA is pursued by researchers because they believe it is the responsible thing to do when research is publicly funded. They also want their work to be accessed and used and

they want to contribute new knowledge to their subject area. Many of the researchers at the RO are early career researchers (ECRs) without PhDs or they have come to research through a non-traditional route. Therefore, it is imperative that REPs are available to provide training and support as and when needed.

Methodology: The conceptual journey to the vignette

The article is derived from practice-research undertaken by two REPs who work in a small research department. New knowledge about research culture in a small specialist RO is gleaned by the means of professional practice and also the processes and outcomes of that practice (**Rolling, 2014; Candy, 2020; Vear, 2021**) as insights about the tensions experienced by the REPs can be gained through critical reflection on practice (**Schön, 1984; Akella et al., 2021**). Considered introspection shared with other practitioners, in this case between the REPs, on the practice-research are called upon to identify particular incidents that reveal ethical dilemmas when making creative outputs open (**Dallow, 2003; Xue & Desmet, 2019; Brown & Patterson, 2021**). This approach acknowledges 'that not everything that is knowable or worth knowing can be captured accurately within mathematical or scientific frameworks or…theoretical orthodoxies' (**Rolling, 2014: 164**). The experience of practitioners is seen as having value and the perspectives it offers can shine a light on how policies (for example those relating to open research, ethics and integrity) are enacted in practice.

As noted previously critical reflection is crucial to practice-research where the decision-making is made open and transparent. The following reflective account demonstrates how the research approach evolved in light of the reflections undertaken by the REPs. The REPs had initially intended to create three case studies that would illustrate significant critical incidents that occurred where there were ethical dilemmas around making creative work open. Case studies were seen as a good option because they would describe the processes and outcomes within the particular context of the small specialist RO. The knowledge derived from a case study, **Shenton** (**2004**) describes as transferable, rather than generalisable, because insights maybe transferred to some contexts and not others. An indicator of quality would be trustworthiness (**Lincoln & Guba, 1985**). The aim of a case study is to create trustworthiness through a rich narrative account where events and processes are represented in a coherent and chronological manner (**Bassey, 1999**). Broadhead (**2019**) claims that case studies depend on, 'descriptive verisimilitude or close interpretation of complex relationships between subjects and contexts' (**Ibid: 62**).

On reflection, the REPs were concerned that detailed, accurate and trustworthy case studies could mean that the researchers and their work are recognisable. Even if the written accounts were anonymised and names were changed there was a risk that the reputations of the researchers, their work and their institutions could be compromised. This would be particularly so as the small specialist context in which the researchers were working was to be described in detail. There was also the emotional impact these case studies could have on the individual researchers concerned, for example, the affective experience of having one's intellectual property stolen and misused can be very distressing for the researcher and may even have legal implications (**UK Government, 2025**).

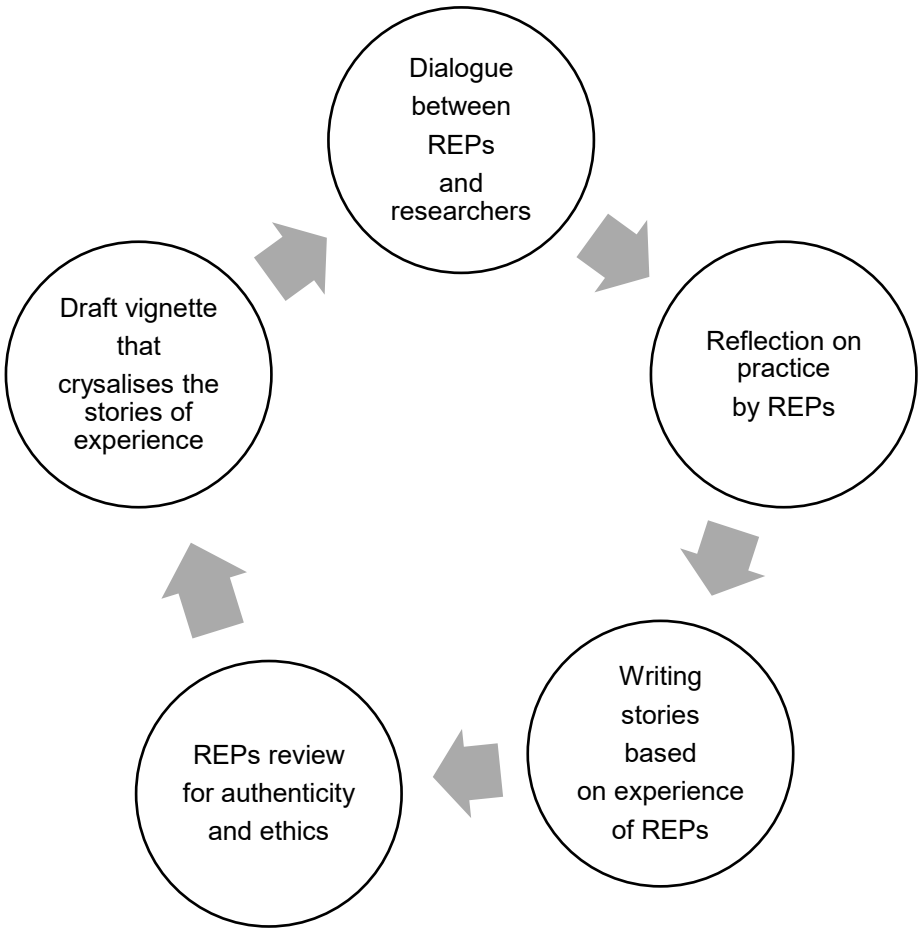
The representation of sensitive research findings was of concern to **Butcher et al.** (**2021**) when they investigated the intersection of race and mental illness. They aimed to ethically disseminate their findings through a series of composite personas (**van Rooij, 2012; Friis Dam & Yu Siang, 2020; Butcher et al., 2021**). This approach is designed to depersonalise stories which can identify individuals and may also evoke traumatic events. A solution was the use of composite personas that ameliorate the backgrounds and identities of the subjects in the research. The REPs wished to depersonalise the case studies, whilst retaining a focus on the events that brought ethical dilemmas to the fore.

In order to mediate against any ethical risks inherent in the case study approach whilst maintaining an authentic and useful story, the REPs decided to construct a series of vignettes derived from the REPs' experiences. Within a research context a vignette is a short story, scenario or depiction of a situation (**Hunter, 2012**). A vignette can provide a trustworthy 'crystallization' of understanding for both the researchers and the readers (**Graue, 2006: 522**). Therefore, rather than describing a particular case in detail, a vignette can condense or abstract the significant features of a series of cases into a story. The story is based on the practitioner's experiences but does not identify any one particular individual or event. Hunter (**2012**) has described the creation of vignettes as telling 'inside stories'. In other words, the REPs were not disinterested agents within the research process, but were insiders with an insider's perspective and ways of knowing. As a result of this consideration of ethical risk, the REPs drafted three vignettes that they believed sprung from their experiences of making creative research openly accessible, checking that they did not identify any researcher. They also made it explicit that these were inside stories written to evoke experience and were not descriptions of actual events.

Method

The REPs scheduled a series of meetings to reflect on their practices in making creative outputs open. They identified the tensions they had experienced as ethical dilemmas. As these reflections also concerned the researchers, they were contacted via email to see if they agreed to their experiences of making work open being the inspiration of a practice-research study. Where necessary a face-to-face discussion was held. The final article would be based on a series of vignettes that would not identify any actual researcher or research project. The REPs devised a research process (see **Figure 1**), based on a cycle of dialogue, reflection on practice, writing stories, reviewing the stories and finally drafting the vignettes that were abstracted from the stories. This cycle was repeated until the REPs thought the vignette was an authentic representation of their experiences.

Figure 1: The Research Cycle.



Findings: The vignettes

Vignette one: The painter

The researcher (the painter) was emailed by a band who asked them if they could use the image of one of their paintings for the cover of their upcoming album.

The band had found an image of the painting online as it had been deposited on an institutional repository as an 'artefact' research output. The image was part of a Portable Document Format (PDF) portfolio under an all-rights reserved copyright to the author of the research; however, this was not indicated anywhere on the repository record. As the output was not available under a Creative Commons (CC) license on the repository, the band offered to pay the researcher to license the image to them. The researcher responded to the email and politely declined the offer.

Several months later the band released their album. Shortly after, the painter saw one of the band's songs on a streaming platform and realised that the band had made an almost identical copy of their painting for the album cover. After some investigation, the painter discovered that the band had paid another artist to reproduce their painting. Despite the commissioned painting being a reuse of the painter's research, they had not been cited anywhere in the album's documentation.

The painter sought advice from the REPs with regards to the issue, as they wanted to know what steps they could take to resolve the situation. The copyright infringement of their Intellectual Property (IP) had made the researcher very upset and angry. Unfortunately, as the painter and the REPs are part of a small specialist institution, legal support is a significant expense and burden on the research budget.

Vignette two: The film-maker

The researcher (the film-maker) co-created a horror film with a visual effects studio specialising in animatronic prosthetics. The collaboration agreement between the film-maker and the visual effects studio allowed for outputs from the research project to be made openly accessible on the film-maker's institutional repository.

When the project concluded, the completed film was deposited to the film-maker's institutional repository as a video research output under a CC BY license. The researcher and collaborators then wanted to disseminate the film further at prestigious, international horror festivals. However, they struggled to get their film accepted for screening as the full work was already openly accessible online on a repository.

To meet a compromise between making the research output open access and allowing the film-maker to disseminate the work further, the REPs removed the full version from the repository and then edited it down into a short excerpt. This was then re-deposited onto the institutional repository alongside a 300-word supporting statement outlining the research process and the contributions to knowledge arising from the project.

Vignette three: The photographer

The researcher (the photographer) made a photobook and exhibition following the lives of a matsutake mushroom foraging community in Oregon. Informed consent was granted from the participants who were photographed in the book. They agreed that the finished photobook could be deposited onto the photographer's institutional repository as an 'artefact' output under a CC BY-NC-ND license. When the research was completed, the photobook was disseminated as part of the exhibition of the photographs. The photobook was then deposited in full under CC BY-NC-ND.

The researcher was later contacted by a participant who featured prominently in the photobook eight months after the work had been uploaded under a CC license asking for it to be taken down. The reason was simply that the participant had changed their mind about the permissions granted, and no longer wanted their image to be openly available online due to privacy. To minimise any further issues, the record on the repository was changed and the photobook was made a restricted item. However, any versions of the work downloaded within the eight-month period would be licensed with the CC license they were deposited under, as they are irrevocable.

The REPs felt that they had done as much as they could to support the photographer and the participant recognising that this was the pragmatic, if not the best outcome they could have hoped for.

Discussion

In vignette one, the item did not have 'all rights reserved' explicitly signposted, nor was it licensed under any CC license. This omission assumes that repository users have a knowledge of copyright law, and that they know that creations are automatically all-rights-reserved copyrighted to the author unless licensed otherwise (**UK Government, 2025**). It may have been clearer if the painter had licensed the work under a CC license, because this makes the image OA, the reuse permissions explicitly and actively assert the author's rights.

In the case of the painter's dilemma, the user did have some knowledge of copyright law, as they offered to pay for the work to be licensed to them for a specific use. However, the absence of clearly marked licensing on the repository record created a perceived vulnerability in statutory framework governing copyright enforcement that unscrupulous third parties could exploit, despite this work still being protected by Section 11.1 of the UK Copyright, Designs and Patents Act (**UK Government, 1988**). Similar situations could possibly be avoided if researchers ensure that they assert their rights through clearly indicating licenses or lack thereof, for their research outputs on the repository record. REPs must therefore be thorough in their training of researchers and when providing research enabling support, ensuring that researchers have a sufficient understanding of copyright and repositories.

Although ensuring that license and copyright information is clear offers some protection in the form of a deterrent, there is no clear process for researchers to follow when license terms are not adhered to. This is particularly an issue for creative outputs such as those of the painter, as this work has been self-archived and not published under a creative commons license. Legal action would need to be pursued, which would require significant resource from either the researcher or their RO. At small ROs, such as that of the painter, there may not be sufficient resource to fund any legal support or representation.

One recommendation arising from this could be that the sector works towards creating an inclusive way for researchers to gain support when their IP is subject to copyright infringement. It is not proportionate or inclusive to assume that all researchers and ROs have the available resources to challenge for legal dispute. Issues in creative research can be emotionally and psychologically damaging - as creative works are often personal to the creator's identity and experiences (**Vessel, Star & Rubin, 2012**). Therefore, REPs working in ROs facilitating creative research need to be especially sensitive and empathic towards the emotional impact copyright infringement may have.

The film-maker's dilemma in vignette two is indicative of where creative industry norms are not always conducive with good practice and conduct in research. Something that is distinctive about a creative output is that its dissemination can take many forms and can be iterative rather than a single, linear occurrence. Further dissemination, for example in international contexts, can strengthen the perceived value of an output because of the international recognition (**REF Steering Group, 2019a**). This is of particular importance when it comes to research assessments, and limiting the researcher's ability to disseminate the work further could affect career progression.

A way of minimising this dilemma could be for creative researchers to plan the dissemination of their research outputs before they are made openly available on a repository. Alternatively, outputs which have not yet met their potential for dissemination opportunities could be deposited on repositories as restricted items until the researcher is satisfied that the output can be made open. These alternatives mean that openness does not present as much of a barrier to improving the perceived quality of the research through further dissemination.

It is, however, important that disseminators of creative research, such as galleries, festivals, and other organisations or venues, recognise that accessing an open item on a repository is a very different experience to seeing it in a presentation context. **Estrada-Gonzalez, East, Garbutt, & Spehar** (**2020: 2**) comment that artworks viewed in 'different presentation contexts' as opposed to on a screen 'have been reported to result in different viewing behaviours' such as prolonged interaction times, and differences in aesthetic experience. This does seem to be acknowledged by some creative research disseminators such as museums and galleries, where institutional repositories have begun to emerge that allow viewers from around the world to have open access to items from their collections (**Styliani, 2009; Tate, 2025**). There also needs further consideration from research policy makers with regards to what openness means for creative outputs, where openness potentially restricts future dissemination opportunities.

In the case of the film-maker's dilemma the REPs were able to resolve the situation through discussion with the film-maker by finding a compromise. The flexible alternative of the video extract works as an adequate representation of the output, and is coupled with a 300-word supporting statement detailing the research process and contribution to knowledge arising from the project. The 300-word supporting statement is REF mandated supplementary information for the submission of an output where 'the role of the researcher or the research process is not evident in the submitted output' and is a requirement for non-textual outputs such as the film-maker's (**REF Steering Group, 2019b: 58**). These 300-word statements are often found on repositories alongside a completed creative output to contextualise the item on record.

The photographer's vignette highlights the need for researchers to provide participants with clear information about the consequences of open access before informed consent documents are signed. This is of particular importance in research where the participant's personal data (their image) forms part of the research output.

In this dilemma a participant requested that the photographs be taken down from the repository eight months after deposit, as they no longer wanted their image to be shared as an open access item online. Informed consent was gained before any work with participants began, and those participating were provided with a project briefing and it was made clear that they had the right to withdraw at any stage. However, the photographer may have needed to make it clearer to participants that once outputs have been deposited under a CC license on a repository, it is not possible to revoke the rights given (**Creative Commons, 2025**).

This is indicative of the importance of effective communication, especially when providing technical information (such as open access) to laypeople. In order to mitigate this, REPs need to ensure that they are providing researchers with thorough training on copyright, licensing, and repository use, making it transparent that, once granted, CC licenses are irrevocable. There also needs to be additional guidance through ethics policies and procedures which are monitored on a regular basis.

Additionally, REPs need to ensure that creative researchers have an understanding that they have a duty of care to their participants. Creative researchers need to ensure that participants are aware that informed consent is ongoing, and that there is a dialogue between researcher and participant throughout the process so that they are informed about how their data/image is being used. It is positive that the REPs were responsive, even though they could not totally rectify the situation. The RO states, in its Open Research Policy, that outputs can be removed or restricted on the institutional repository on ethical grounds, which enabled them to act swiftly and comply with the participant's wishes.

Conclusion

The iterative cycle of dialogue, reflection on practice, vignette-writing and review has exposed the dilemmas that can exist between the desire to make research outputs open and the rights of researchers and participants. It is often the role of the REPs to try to resolve these tensions or dilemmas when they arise. Sometimes a compromise can be sought that partly resolves an ethical dilemma. However, the need to anticipate some of the ethical risks is apparent because when the output has been made public on a repository it is often too late to reach a satisfactory solution for all interested parties. The emotional impact this can have on people involved in the research process cannot be underestimated and REPs are often mindful of the need to act with sensitivity and compassion. Violation of intellectual property from creative research can feel invasive as artwork can be very personal and emotive.

A series of recommendations are suggested for the improvement of practice going forward. It is acknowledged that these suggestions may only decrease the likelihood of such dilemmas arising rather than stopping them altogether.

Researchers should plan their dissemination strategies including the licencing approach carefully at the earliest opportunity, ideally when the research project is being designed. This would enable them to inform their participants about how their contribution will be represented on an institutional repository. It would also mean that researchers could decide, strategically, when the best time would be to deposit an output so that it does not bar them from further dissemination.

ROs and REPs should look for opportunities to train researchers in issues related to intellectual property, OA, and in particular, the benefits of licencing the work so that the terms of reuse are clear and explicit to third parties. Additionally, the vignettes used within this article can be used as examples during this training. A further step REPs should take would be to work towards to development of an open database of vignettes which highlight intellectual property issues experienced by creative researchers. These could include future vignettes illustrating the complexities and intellectual property concerns raised by AI data scraping on repositories hosting creative outputs.

OA should not curtail any future dissemination that enhances the output. It would be beneficial for there to be recognition by people running festivals and other dissemination platforms that viewing a film at a festival is a very different experience from viewing it on a computer screen via a repository. However, film festivals and art galleries are not necessarily designed with the dissemination of research outputs in mind. Further consideration is needed by policy makers about what openness means for creative outputs, and where openness can restrict future dissemination opportunities.

The policies related to research misconduct often do not address the misappropriation of intellectual property by third parties outside academia and it would be difficult to enforce them if they did. This omission creates uncertainty for creative researchers, leaving them with the dilemma of risking making their outputs OA or protecting their IP but falling short of adhering to good research practice. The research sector should consider clear and inclusive ways for researchers to gain support for when their intellectual property is subject to copyright infringement.

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Breaking Bad Barriers to Pursuing Research: A concordat to research equity (part 1)

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Abstract

This research looked to cast light on intersectional issues by considering barriers faced and connecting the difficulties encountered in pursuing a research career with participation in various identities.

Job instability, international (im)mobility, an undiversified workforce, biases faced in research collaborations and in hiring processes are just some of a wide variety of barriers affecting researchers in their day-to-day work life and in establishing and progressing their careers. Some of these barriers, due to their nature, adversely affect particular identities more than others. This can lead to negative outcomes for individuals who are prevented from successfully pursuing their career of choice, reinforcing identity stereotypes and perpetuating a lack of inclusion.

Our research sought to identify real, potential and perceived barriers that exist to leading or taking part in research, recognising their existence and impact in our own multidisciplinary engineering and science academic department's context. Barriers were explored through a survey in the first instance with subsequent focus groups. We considered 4 macro-areas of barriers: Belonging and Community; Time and Timing; Access to Resources; Communication and Information. This research tested the completeness of our understanding and elucidated the impact of the barriers on researchers' careers. Further, we explored individual and community identity, also considering those groups of people displaying identity traits traditionally underrepresented in academia in STEM, and particularly Engineering, deriving greater nuance from lived experience and the importance of fairness, kindness and belonging in the workplace.

Keywords: equity; barriers; action; identity; careers; researchers; STEM

Introduction

It is commonly understood that there is a 'leaky pipeline' within the career paths of STEM researchers. Many face a host of challenges on their journey to pursuing a role in research, and it has been posited that some of these barriers adversely affect particular groups more than others. This leads to negative outcomes, not only for individuals, but the STEM sector at large. (**British Science Association 2021; Clancy & Goastellec 2007; Crenshaw 1989; EngineeringUK 2021; Department for Education 2024; Guyan & Oloyede 2019; House of Commons 2023; Mitra & Dopson 2024; Moore & Piddini 2023; Palid, et al. 2023; Prince & Francis 2023**).

Our project sought to explore the range of real, potential and perceived barriers that exist to leading or taking part in research in our own academic department's context, ultimately aiming to inform an action plan to support researchers and academics across our community in their pursuit of a fruitful research career.

The diverse Research Team comprised of five members with very varied backgrounds: our lead researcher from Philosophy with very current personal experience of career instability; an undergraduate Sociology student interested in fairness and community behaviour; two STEM academics, one early career and one more experienced, both actively championing inclusive practices for their teams and colleagues; and the Head of Research Support, previously an engineer who had to leave an active STEM career behind herself, with current responsibilities extending to grant support, talent development and research culture. All were actively pursuing, or supporting others to pursue, careers in research, and brought their own experiences of various barriers encountered throughout their careers. This project created a space to explore such obstacles and their effects in a structured way, with immediate opportunities to act on the learnings discovered.

Barriers could be grouped into four categories: Belonging and Community; Time and Timing; Access to Resources; Communication and Information. These were explored through a survey and focus groups to elicit rich and meaningful data, examining the nuances around issues and collecting examples of lived experience. The qualitative data complemented the numerical opinion scales, aiding an enhanced understanding of the types, levels and features of the barriers encountered.

Further, we explored individual and community identity, also considering those groups of people displaying identity traits traditionally underrepresented in academia in STEM, and particularly Engineering. This research looked to cast light on intersectional issues by considering

barriers faced and connecting the difficulties encountered in pursuing a research career with participation in various identities.

In this article we present the findings from our research on our greater understanding of the problems derived from the survey undertaken. Additionally, we intend to subsequently publish our analysis of the focus group discussions and details of our positive action plan with considered solutions to improve the culture, working environment and career opportunities for our research community. Ultimately the aim is to engage to inform practices more widely across the University sector; to create a positive environment for all. As Holly Branson, Chief Purpose and Vision Officer of Virgin Group states:

> *The joy and success of a work culture where everyone feels that they belong, have a shared purpose, and are respected and valued equally to their colleagues, regardless of their gender, ethnicity, neurodiversity, disabilities, or socioeconomic background, should never be underestimated.* (**Branson, 2023: ix-x**)

Background

The current literature on the spectrum of barriers to equality and inclusiveness that are faced within research careers is limited, with a focus on certain protected characteristics. Although there is an interest in developing resources and collecting data relating to Equity, Diversity, and Inclusion (EDI), there is still a warranted need for a more comprehensive approach which goes beyond factors of identity, tackling the various barriers faced by underrepresented individuals and groups across academia. This would support identification of the problems that researchers meet regardless of their identities, enabling supporting services to develop more effective and accurate actions to both enhance diversity and inclusiveness in research and support the research community overall.

Regarding identity, evidence from previous research suggests that those from underrepresented groups are less likely to obtain funding for research, as well as to attain senior positions in academia (**Prince & Francis, 2023**). However, there is little discussion utilising an intersectional scope, for example considering issues caused by (or more often encountered by) individuals with multiple overlapping identities. Intersectionality was initially introduced as an analytical framework for understanding how interrelated and mutually shaping categories of race and gender served to compound inequalities for minoritised people (**Kozlowski, 2022**). Since then, the international framework has been expanded to frame the marginalisation experienced by minoritised groups and the intersection of race, gender, sexual orientation class and other

identities (Ibid). In STEM (and society at large) individuals can experience discrimination as a result of their race, gender, sexual orientation or socioeconomic background, among others. This is invariably compounded for individuals who identify with more than one of the minoritised groups.

A primary focus of current scholarship within the field of EDI is on the ways in which identities are distributed amongst the STEM workforce. The risk with such an approach is that one can often overlook the specific barriers these groups face on a practical, daily basis. The British Science Association's final report on Equity in the STEM Workforce (**2021**) highlights how understanding these barriers can facilitate sustainable improvements and growth within the field. It emphasised that empirical evidence supporting the benefits of diversity and inclusion is currently insufficient, and lacking intersectional data. This points to a gap in the literature and the need for further research, including into the themes which emerged from our literature review of isolation/belonging, time and timing, support, communication, information and resources. Furthermore, the literature shows that there has been arguably a greater focus on gender inequality in STEM careers than other forms: 'While the UK has come a long way towards improving social and economic opportunities for women, inequalities remain in a number of areas' (**Guyan & Oloyede, 2019: 20**). Of relevance to our project, it is suggested that societal inequality might even originate in workplaces, making them critical and also ideal locations to investigate 'continuously complex forms of inequality', (**Acker, 2006: 441**).

In order to obtain a comprehensive understanding of the barriers within the field of STEM in our study, we were interested to investigate intersectional perspectives if possible, considering if there was any evidence that spoke to different, more complex or specific collections of barriers for individuals with multiple overlapping identities. The House of Commons Science and Technology Committee's report (**2023**) stresses that problems of underrepresentation should not be viewed in isolation, as different characteristics can combine to create unique barriers. To explain further, we can trace back to Crenshaw's basement thought experiment, which provides a useful analogy for understanding the intersectional burden of certain individuals. The theory posits that people benefit due to the singularity of their burden, and that the escape hatch located at the top of the basement is available only to those who are multiply burdened if they are willing to pull themselves into single-burdened groups to squeeze through (**Crenshaw, 1989: 151-152**). The British Science Association found such intersectional investigation would take too much resource and time in their 2021 report: 'Analysis of the sector by individual characteristic lacks intersectionality but was the most efficient method of examining the available evidence' (**British Science**

Association, 2021: 19), and encourages readers to consider all of the single-identity evidence in totality, acknowledging that intersectional barriers such as those related to gender, ethnicity and socio-economic status might emerge and spread into the workplace.

A study into barriers existing in academic careers was recently conducted at the University of Oxford which looked at different types of underrepresentation relating to gender, ethnicity, disability, sexual orientation and social class. The findings revealed that individual experiences stemmed through the interplay of more than one of these factors at any given time, therefore promoting the need for further intersectional research into EDI (**Mitra & Dopson, 2024**). However, Engineering UK's strategy (as conveyed in their report covering the 2019–22 period) lacks this significant perspective, overlooking how overlapping identities can exacerbate challenges for individuals from lower socioeconomic backgrounds.

Another factor which must be taken into account is the influence that the COVID-19 pandemic has had on the results and findings of recent studies, warranting the need for new and updated research in a post-pandemic era. The pandemic forced the adoption of flexible working solutions and enhanced technologies to allow researchers to continue their work safely and, most frequently, remotely. It also clearly presented unexpected challenges to productivity, lab-based work, data collection and research in general. EngineeringUK (**2021**) recognises the disruption caused by the pandemic but nonetheless notes the increased visibility of the engineering sector during this period and the positive effects of improved EDI on productivity and innovation. As we move beyond the constraints of COVID-19 equipped with new experiences of flexible working environments, now more than ever it can be argued that EDI strategies should be implemented to the fullest extent to reap the immense benefits they can create for workers themselves as well as the wider industry. The British Science Association's (**2021**) report also supports this view, suggesting that new research can help shed light on the results gathered during the pandemic. This discussion has been in the context of STEM-related organisations in general, but moving forward and emerging from the pandemic, there is a need for a closer look at research/academic institutions as we move into a more contemporary society, as has been argued previously: 'focused research at institutional and sector-level will have the added benefit of nurturing an understanding of social inequalities' (**Clancy & Goastellec, 2007: 151**).

Our literature review underscores the value of integrating qualitative insights to supplement a rigorous survey-based quantitative analysis. The British Science Association's research indicates that there is a significant

amount of quantitative data within the STEM sector, yet a lack of qualitative data (**British Science Association, 2021 Report: 51**). Qualitative research can capture the nuanced experiences of workers in research careers, offering deeper insights into the specific barriers they may face and is therefore essential. However, this does not detract from the usefulness of, and the need to implement accurate and comprehensive, quantitative methodologies. When used effectively these can provide clear evidence for resulting outcomes (**Palid et. al, 2023**). Such a mixed methods approach influenced our methodology, as described below.

Methodology

The study was organised in two phases: an initial survey aiming to define and understand the barriers faced by STEM researchers in pursuing a career in academic research, and a follow-on workshop aiming at providing a safe space for participants to reflect on how their working experience has been affected by these barriers. This paper focuses on the initial survey, where barriers faced by STEM researchers were investigated specifically within the department where this study was conducted – Warwick Manufacturing Group (WMG). The anticipated outcomes from the survey were:

1. Understanding of the commonality and relevance of barriers gathered from the literature and the anecdotal reports received by WMG Research Office;
2. Identification of barriers that have not been captured by the above sources;
3. Recognition of the level of impact of the barriers identified;
4. Identification of potential correlations between certain characteristics of the researchers and the common types of barriers they face.

The identification of barriers in existing literature was conducted using both direct and indirect approaches. Direct approach involved direct reference to barriers reported in the literature, where the barriers were usually obvious and well-defined and with clearly negative impact, such as hostile environments, bullying and harassment in the workplace (**British Science Association 2021: 24, 43**). Indirect approach involved defining the barriers through the authors' own analysis and inference. Such barriers tended to have less obvious correlation with the impact they had caused, and sometimes could only be identified through indirect evidence. For example, the very low number of grant applicants and grant holders who respond that they identify as disabled indicates there may be barriers to people feeling comfortable to respond (**Wellcome Trust, 2021**). As a

further example, a report by a scientific society had found that in some recruitment cases, changing certain selection criteria and recruitment requirements could attract more applicants with a certain minority background (**EngineeringUK 2021: between points 31 and 32**). The underpinning issue here is that the recruitment practice is not inclusive of researchers who are not familiar with it. This could include early career researchers, researchers from a different research background, and researchers who have not received necessary support.

Four macro-areas of barriers for pursuing a successful career in academic research were identified: 1) Isolation and disconnected community, 2) Limited time (for research) and poor timing (for research outcomes and career stability), 3) Limited access to resources, 4) Lack of clarity around job roles, progression and grant capture. The survey also recorded anonymous data concerning (protected) characteristics of the participants to investigate if certain types of barriers are more likely to be associated with certain characteristics. This approach not only inspires more targeted solutions to tackle the barriers, but also addresses the lack of intersectionality in the current literature concerning inclusiveness in STEM. It should be noted that participants were given the option to not disclose their characteristics, in which case their responses to the remaining questions would be excluded from the analysis on the correlation between characteristics and types of barriers.

The survey questions were presented as a mixture of open questions and rating questions. Three open questions were positioned at the beginning asking participants to reflect freely on 1) the barriers to conducting research they had encountered so far, 2) the obstacles that they could envision in proceeding further in their aspirations, 3) the reasons for which they might have thought to abandon a career in academic research. This was done to avoid influencing participants through more direct and specific questions and gave us the chance to gather data concerning barriers that were prima facie perceived by (unprompted) participants as pressing and concerning. Additional open questions were included in each section and at the end to allow participants to expand, clarify or share specific episodes concerning aspects of their experiences. This gave us the chance to capture nuances and details concerning barriers that were already recognised by the research team (through literature and anecdotal reporting) but that could show up in distinctive forms and shapes in the participants' personal experience in WMG. The rating questions were formulated in statements that participants could agree or disagree within a five point scale from 'Strongly agree' to 'Strongly disagree', with an additional 'not applicable' option. This provided the research team with quantitative data that pointed to the most pressing and widespread

barriers experienced by participants making clear which should be addressed urgently.

The survey was distributed to around 200 research-active staff within WMG, among which 44 participants (approximately 20%) fully engaged with the survey. Reponses to open questions primarily yielded qualitative data which was then categorised into the macro-areas described above, with barriers not captured from the literature review highlighted. The rating questions yielded quantitative data, which was analysed in two ways: 1) descriptive statistical analysis on individual questions to assess the commonness and impact of the barriers and 2) bivariate analysis to assess the correlation between personal characteristics and barriers.

A key limitation of the study was the lack of representatives of several minority backgrounds due to the small number of participants, which affected the intersectionality study most. For instance, gender could only be considered on a binary basis (female/male) as no other gender identities were captures in the data, and results related to disabilities, religious views, ethnicity and part-time contracts were inconclusive.

The study received full ethical approval from the University of Warwick's Biomedical and Scientific Research Ethics Committee, reference 80/23-24.

Results and Discussion

This section presents key findings from the survey analysis, organised around the identified macro-areas extracted from the barriers: Time and Timing, Communication and Information, Community and Belonging, and Access to Resources.

Figure 1: Responses ranked by 'Strongly Agree'.

I feel there are unwritten rules in my research environment that I do not understand	40.91
… realistic timing for applying for the following contract to ensure employment continuity	27.27
I feel I am not receiving enough guidance by mentors and senior academics	27.27
I feel that I am not going to progress further in my research career due to lack of clarity of requirements for promotions	27.27
…timing to achieve all required goals, putting pressure on researchers' mental and physical health	27.27
I feel that hidden responsibilities involved in my current position impact on my capacity to dedicate time and efforts to my research	25.00
… realistic timing for applying for follow-on funding	22.73
… realistic timing for mandatory administrative and bureaucratic tasks	20.45
I find it difficult to access information about how to obtain further funding	20.45
…the appropriate amount of time required for conducting research and developing outputs, outcomes and impact	20.45
…caring responsibility for elderly or fragile family members	18.18
… the time needed to acquire necessary transferable skills (e.g. learning a language)	18.18
… realistic timing for teaching duties	18.18
It is unlikely for me to be able to reach full professorship status	18.18
… realistic timing for publications in my field	18.18
I am not sure what I should prioritise to achieve my research and career goals	18.18
I find it difficult to access information about sources of funding	18.18

13 of the top 23 questions ranked by 'Strongly agree' response related to 'Time and Timing'. Time to find the next role, to achieve required goals, to fulfil hidden responsibilities and to apply for further funding were all of concern. However, the 'Time and Timing' category also provided the

majority of neutral responses, indicating that for some this group of barriers are very pervasive but for others there is a level of ambivalence. The barriers of finding the time to create impact cases (neutral responses 31.8%) and finding the time to acquire transferable skills (neutral responses 27.3%) were the most neutral. The first of these may not have seemed relevant to all respondents, particularly if answering within the context of REF (the UK's Research Excellence Framework assessment exercise) which previously has had strict eligibility criteria and for whom those eligible staff form a subset of our survey population. However, when combined with the 'not applicable' responses, this question falls significantly down the ranked list, indicating a true ambivalence to this barrier. 'Impact is defined as the effect or change over time that we can see, demonstrate, measure or capture on different stakeholders.' (**Campillo et al., 2023**). Perhaps instead this type of activity, usually performed over the longer term, does not bring with it the strength of feeling that an inability to complete more immediate and urgent tasks, or the 'latest and loudest' (**Allen, 2017**), do.

There are various tools available to help people analyse their work activities, such as the Eisenhower Matrix which plots tasks on two axes: time (urgency) and importance (strategic alignment to goals) (**Obolensky, 2010**). Studies have shown that people are able to identify and prioritise tasks relatively accurately which either have both or neither of these characteristics but are less able to complete tasks which are important but non-urgent (**Zhu, 2018**).

Kennedy and co-authors (**2022**) suggest 'faculty, like many individuals, have difficulty prioritizing important tasks over those that seem more urgent' but also notes the limitation of such two-dimensional analysis, suggesting that 'in reality the academic environment is more complex'. Peter Drucker has written, 'knowledge workers themselves define what the task is or should be' and that a key component of knowledge work and associated productivity is 'to learn to define quality' (**Drucker, 1999**). Bruce Daisley goes further in The Joy of Work (**2019**), describing the notion of a Victorian mill owner and that style of management, or self-management: 'It's not just that mill owners are bad for morale or that they may get in the way of someone doing their best work. They also make us focus on the wrong end of the productivity equation', referring to presenteeism and other outdated notions of productivity (**Daisley 2019: 61**) which do not necessarily improve either the quantity or quality of output. Neither does the very nature of research, being open-ended, full of uncertainty and with unknown horizons, help this situation.

A further highlighted barrier was time for mandatory administrative and bureaucratic tasks. One could argue that in order to accomplish everything required in a research role these administrative and bureaucratic tasks should be minimised as much as possible, and their mandatory nature should be reviewed on a regular basis. The Government's Workload Reduction Taskforce (**DfE, 2024**) relating to UK school teachers is an example of one such initiative.

Certainly, the depth of feeling by our respondents within the theme of 'Time and Timing' would suggest that more guidance and support to help colleagues truly identify 'effective' tasks (important but non-urgent) and find ways to complete these to the detriment of 'distractions' (non-important but urgent) (**Covey, 2004**). Implementing such guidance and support might lead to increased agency, removing some barriers preventing researchers from successfully pursuing the careers they love, and improve overall mental health in the process (**Davidson, 2005**).

Communication and information: Unwritten rules and missing clarity

Figure 2: Responses to Communication and Information.

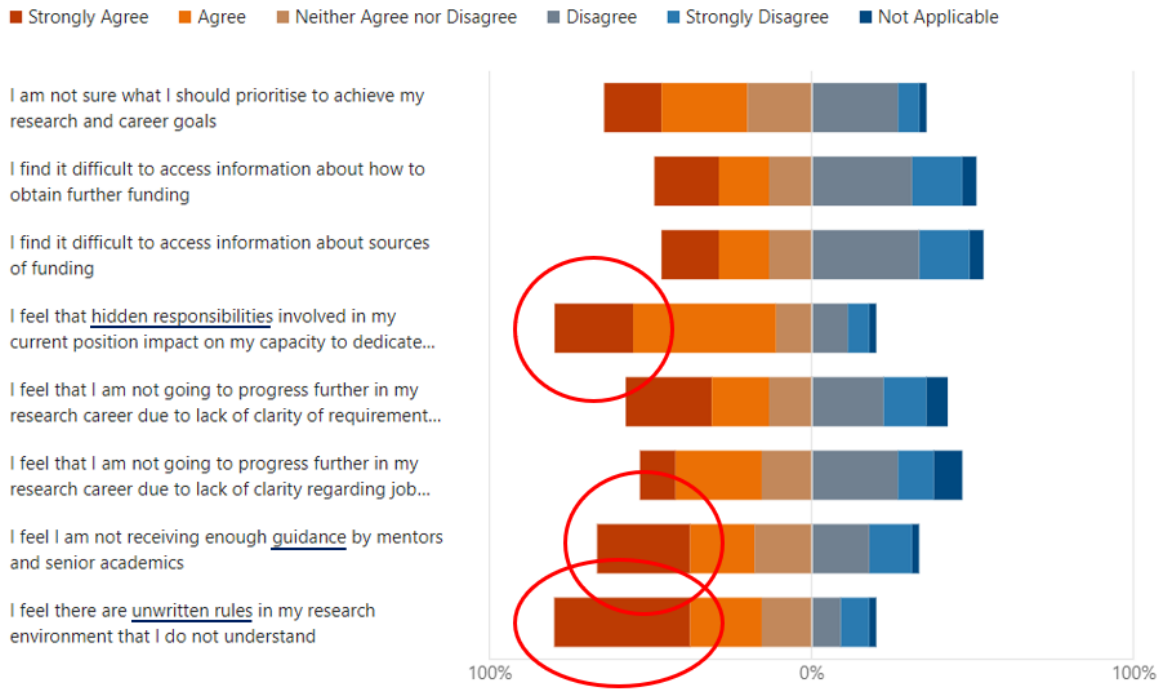
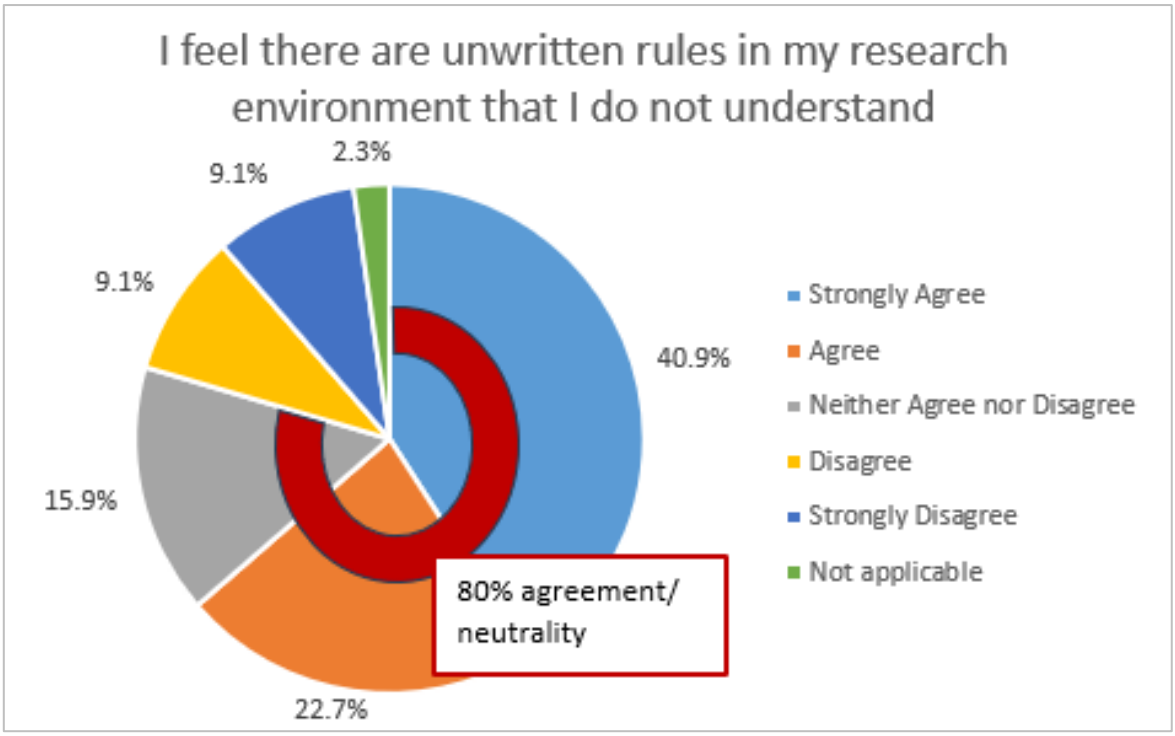


Figure 3: Unwritten rules responses.



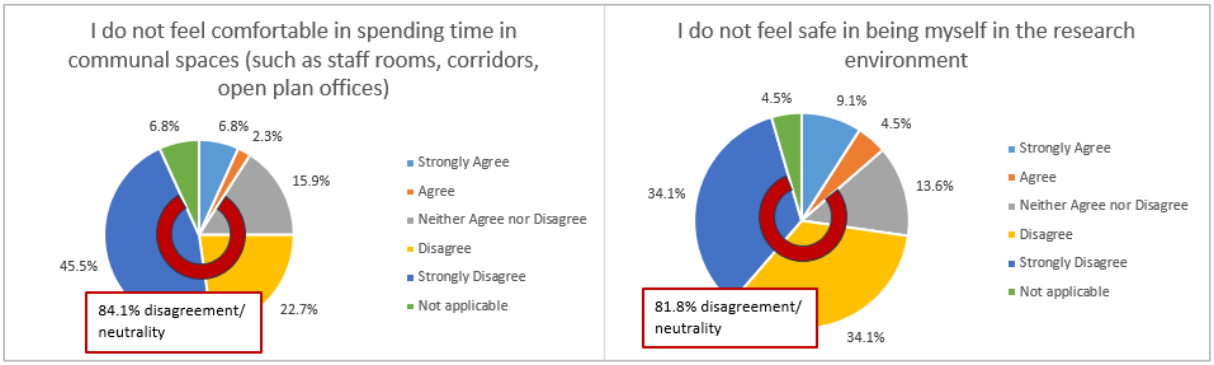
41% of respondents strongly agreed with the statement 'I feel there are unwritten rules in my research environment that I do not understand', the statement with the highest level of strong agreement of all the questions. This was followed by strength of feeling around insufficient time to secure employment continuity, to achieve all required goals, having clarity on what those goals are, and receiving sufficient guidance and mentoring. Hidden responsibilities and time to secure follow-on funding, linking back to secure employment, were also high in the list (**see Figure 1**). These areas remained consistently high when incorporating the 'Agree' category. When including the neutrality option, these were joined by worries over unwritten rules. According to the findings, early-career researchers feel particularly disadvantaged due to the opacity of institutional knowledge, and insufficient guidance was felt strongly across all career stages except the most experienced category.

Communication and belonging: Strong feelings, divided views

On the other hand, negative aspects of community had the most instances of strong disagreement. Respondents did not feel difficulties communicating effectively with co-workers (77.3%), did not have their abilities and competence questioned (72.7%), did not feel uncomfortable in communal spaces (68.2%), nor in being themselves in the research environment (68.2%). When also considering the neutral responses, these latter two questions increased to 84.1% and 81.8% respectively, which does however leave an unacceptable 9.1% and 13.6% respectively feeling

as though they were not welcomed in communal spaces and were not able to be themselves at work.

Figure 4: Strongest disagreement and neutrality.



When considering the responses with the strongest feeling behind them in one direction or another, for example those with the smallest number of neutral or not applicable responses, nine of the top eleven are from within the overall theme of community and belonging: clearly an area that provokes strong feeling and emotion for many of our respondents. Some of the free text comments reached as far down through Maslow's hierarchy of needs (**Maslow, 1943**) as the third level for love or belonging, with many comments existing in the esteem category around respect by others, self-esteem, status and recognition.

Belongingness has been described as 'the universal need to form and maintain positive, stable interpersonal relationships' with researchers suggesting a growth orientation aimed at interpersonal actualisation gives greater intra- and inter-personal psychological functioning compared to a deficit-reduction orientation, aimed at interpersonal repair (**Lavigne et al., 2011**). Indeed, Baumeister and Leary (**1995**) state that the need to belong is so powerful and pervasive that 'people form social attachments readily under most conditions and resist the dissolution of existing bonds'. This is a fundamental need, and they further posit that much of human behaviour is in service of belongingness, without which there is not much value.

In terms of organisational psychology, feelings of belonging to a workplace culture inherently increase our internal self-esteem and also can increase engagement, motivation and productivity at work (**Maria et al, 2024**), making this a factor which arguably should receive more attention from institutions. Holly Branson (**2023**) agrees: 'To be a truly purpose-led business (and therefore a successful one!) your people and their wellbeing should be at the heart of everything you do. The issue comes when leaders don't actually know who their people are'.

One way to increase attention on this facet is to increase the frequency and depth of conversation. Sigal Barsade has championed the notion that we should talk more about friendship, belonging and love at work, encouraging 'companionate love' in the workplace. 'Employees do not leave their humanity at the door when they walk into an organisation', and recognising this can lead to benefits such as greater job satisfaction, commitment to the organisation and accountability (**Barsade, 2015**). Standards are highest when we feel a sense of close affiliation with our group, and so as well as improved quality this is also the situation when the 'emotional contagion' of a supportive culture can manifest most easily.

Looking at those working in STEM, it is critical to understand the influences around what 'STEM belonging' means from the feedback from diverse researchers in order to ensure equity. Belonging-uncertainty is defined as the quality of social relationships within an academic setting and can manifest as the belief that 'people like me do not belong here' (**Dost, 2024: 11-12**). As mentioned previously, when the survey statements were ranked for polarisation, the majority were from the belonging and community category, such as 'I feel that my research environment is not inclusive' with 11.36% of respondents stating they Strongly Agreed, against 34.09% who Strongly Disagreed, and 'I perceive the research environment as hostile and unwelcoming' with 13.64% who Strongly Agreed and 27.27% who Strongly Disagreed. Another highly polarised response was for the statement 'I find it difficult to access information about how to obtain further funding', where 22.73% strongly agreed, whilst 15.91% strongly disagreed. Some polar differences were particularly noticeable around the identity characteristics of gender, ethnicity and career stage, further discussed below where we considered an intersectional lens.

Access to resources: Well-stocked, available

It was good to see that the University's excellent library provision was recognised, with 52% of respondents strongly disagreeing that access to literature presented a barrier for them pursuing research, and this increased to 89% when including the 'disagree' and 'neutral' responses. In our specific context few respondents cited issues with resources as barriers to progression.

Intersectional inequalities: Career stage and gender

One way of considering intersectionality is that of a metaphor for understanding the ways that multiple forms of inequality or disadvantage sometimes compound themselves and create obstacles that often are not understood among conventional ways of thinking (**Aiston & Walraven, 2024**). Within the workplace, intersectional inequalities exert in the career

progression experiences of women across different ethnicities in the UK (**Kele et. al, 2022**).

When discussing 'ethnicity + career stage + gender + intersectionality in STEM', it refers to the complex interplay between a person's ethnic background, current career level, gender, and how these factors overlap to create unique experiences and disparities within STEM fields (**Sparks et al, 2021**).

With regard to certain identity considerations, there were some polar differences in responses as a function of gender and significant correlations were found during data analysis with the following survey statements:

(i) I feel that my research environment is not inclusive.

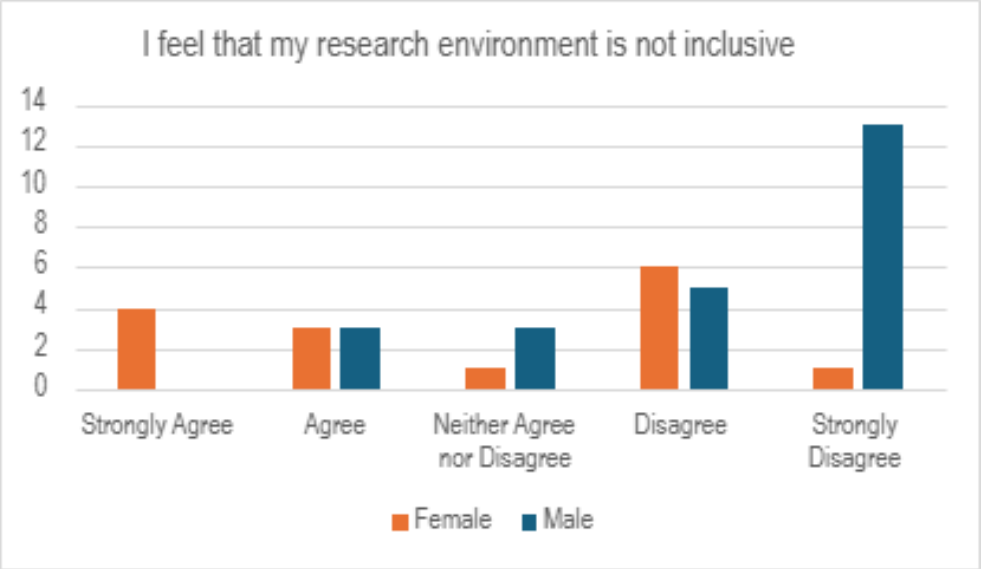
(ii) I feel unsafe while conducting research because of needing a second source of income to cover my living costs.

(iii) I feel there are unwritten rules in my research environment that I do not understand.

(iv) I feel that I am not taken seriously in my workplace.

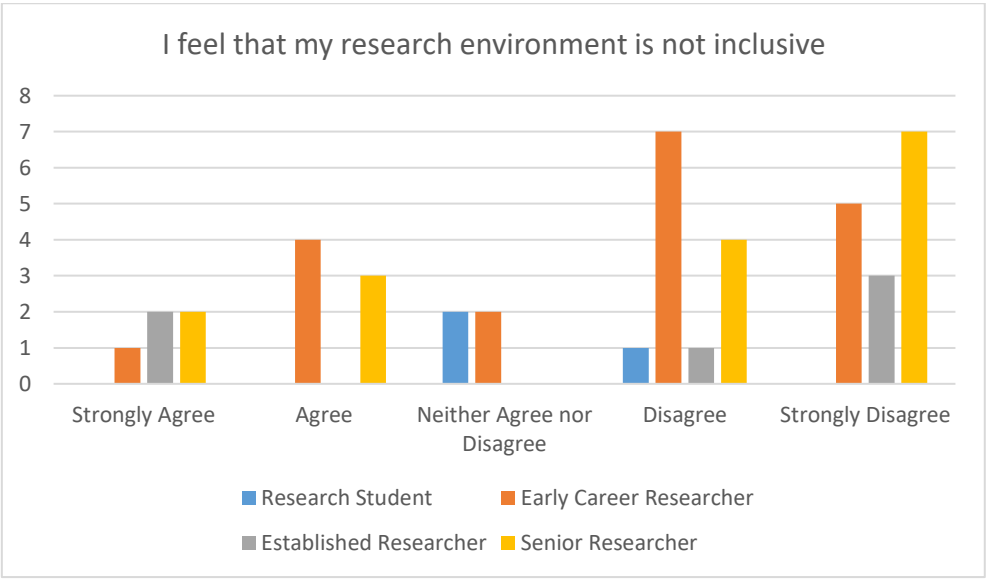
Statement (i) was responded to significantly differently between male and female participants, with 54% of the male responders strongly disagreeing compared with 4% of female responders. 27% of females strongly agreed with this statement with no male responses submitted to this category. These responses came from a range of career stages from early career to established research staff. Interestingly similar number of males and females disagreed and agreed. However, it would appear that women were more likely to relate to this statement, with a p-value for the chi-square test of 0.0071, significantly less than the typical alpha value of 0.05 suggesting that there is a significant dependence between the two variables of gender and opinion. Within the free-text box, multiple female respondents commented that they could not see anyone in leadership 'like them', and some also raised concerns that their interdisciplinary background, including the social sciences, was not valued within a STEM context.

Figure 5: Gender responses to statement (i).



This statement also showed the strongest dependence across career stage, with a chi-squared p-value of 0.04495. These findings form part of a pattern where women and early career researchers were consistently more likely to report barriers, particularly those rooted in culture, communication, and inclusion.

Figure 6: Career stage responses to statement (i).



With regards to statement (ii) concerning the need for a second income (**see Figure 7**), the largest negative response came from male staff with 17 of the 23 male respondents disagreeing or remaining neutral. None of the female respondents selected Strongly Disagree at all. Statistical significance between female respondents and agreement was confirmed by a chi-squared test providing a p-value of 0.04776 when considering just the 5 opinion options as per Figure 7 below, which reduced even further

to 0.01055 when also including the Not Applicable answers, indicating a strong relationship. Across career stages, Research Students were wholly in agreement with this statement, whilst Established Researchers were either neutral or in strong disagreement. Within the comments there were references to the particular struggles of single parents, and also the plight of PhD students and the stipend levels which concurred with the quantitative data.

Figure 7: Gender responses to statement (ii).

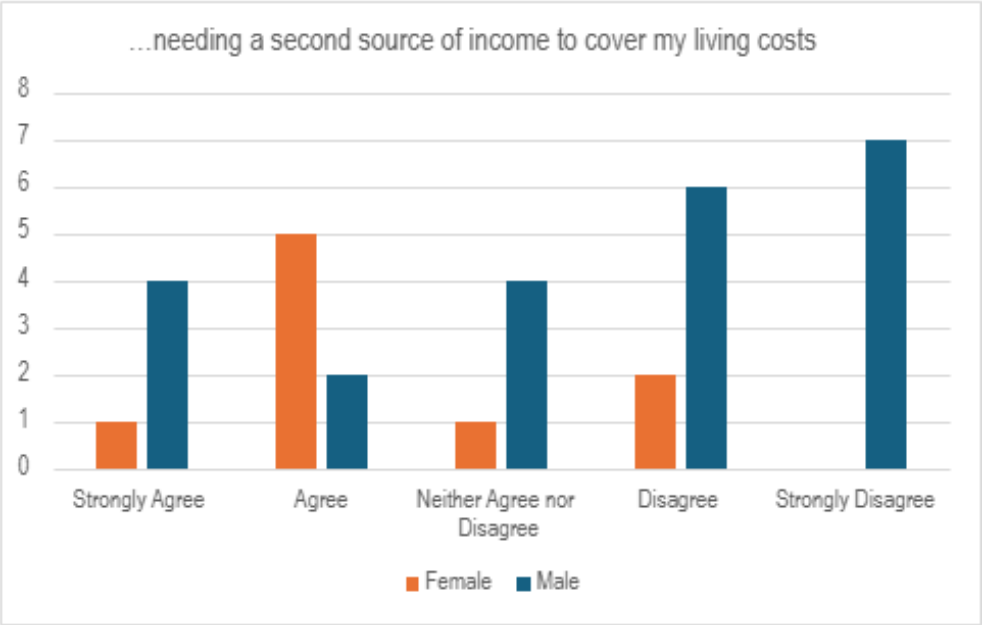
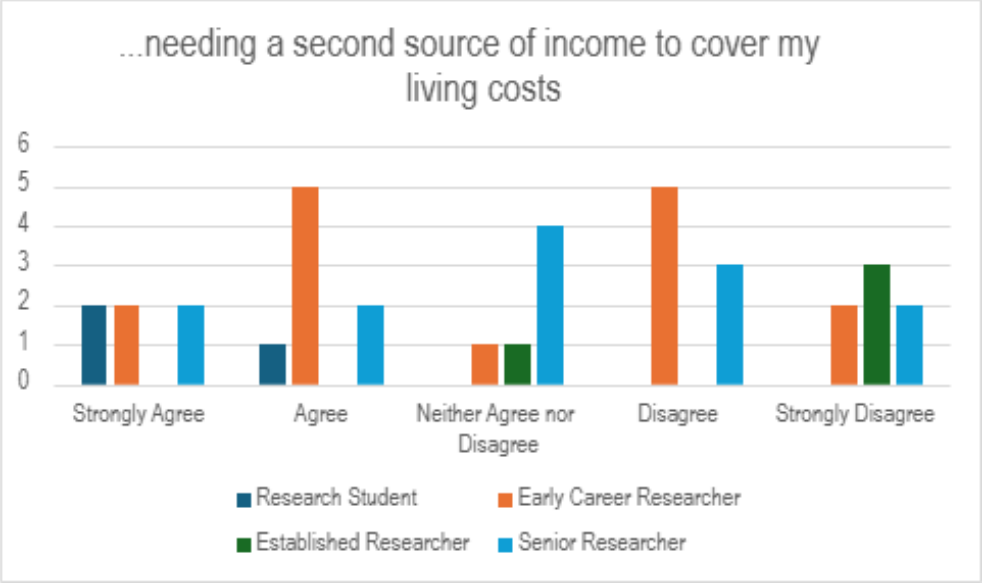


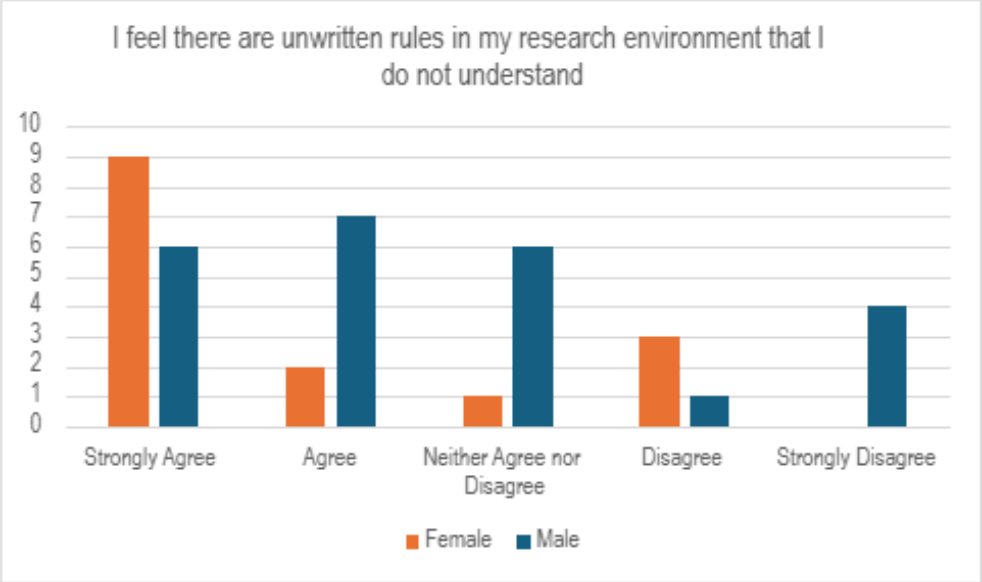
Figure 8: Career stage responses to statement (ii).



Statement (iii) around unwritten rules drew a large positive response from female staff, with 60% strongly agreeing with this statement, compared with 25% of male responses respectively. Male responses were quite evenly spread across agreeing or disagreeing, but it was only male

participants who strongly disagreed with this statement (ca. 16%). The p-value from the chi-squared test was 0.03381, less than the 0.05 alpha value indicating dependence between gender and opinion for this statement. Comments within the relevant free-text section mention clarity and subjectivity around probation (tenure requirements) and promotion, also the quality of onboarding when joining the organisation and clarity around the roles and responsibilities of the different support teams, with a suggestion that those who understand how to utilise these support structures the best will progress most rapidly.

Figure 9: Gender responses to statement (iii).



With regards to statement (iv) around being taken seriously in the workplace, the majority of males disagreed or strongly disagreed (75% of the male response), with quite an even spread of female agreement and disagreement. Responders selecting disagree options came from both early and established career stages, and again there is a clear correlation between gender and opinion on this statement, with a p-value of 0.02367, less than an alpha value of 0.05, hence the data here suggest that females within our study felt they were not taken seriously more than males did (**see Figure 10**). Additionally, participants earlier in their career did not show so much agreement, and more senior researchers tended towards disagreement, however we were unable to verify dependence between career stage and opinion.

Some participants explored the nuances of the different communities they were a part of and the culture within these, with one stating: 'There is a big difference between Team, Network, and Community'. Participants commented on the variations between individual personalities and how closely they are situated within particular individuals' locus of control, particularly within the decision-making hierarchy. There were also

distinctions made between how participants view their professional identities and networks, with one responder stating: 'I feel well connected to 'my' team/network/community - just that 'my' team/network/community is not what I would see the group I am working in as being part of'. Other participants discussed how their colleagues, supervisors and 'the system' appeared to value research project income over outputs or outcomes which in some cases did not align with their own values, leading them to be taken less seriously. In other cases participants bemoaned the constant race for funding and the time this takes, whereby having a strong track record of funding was considered 'necessary' to be taken seriously, but this placed a lot of pressure on work life.

Figure 10: Gender responses to statement (iv).

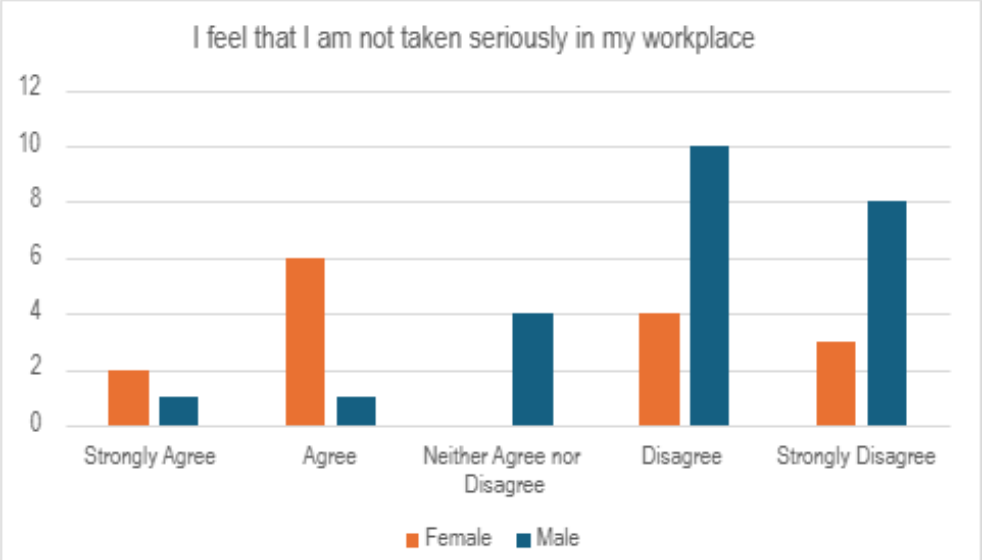
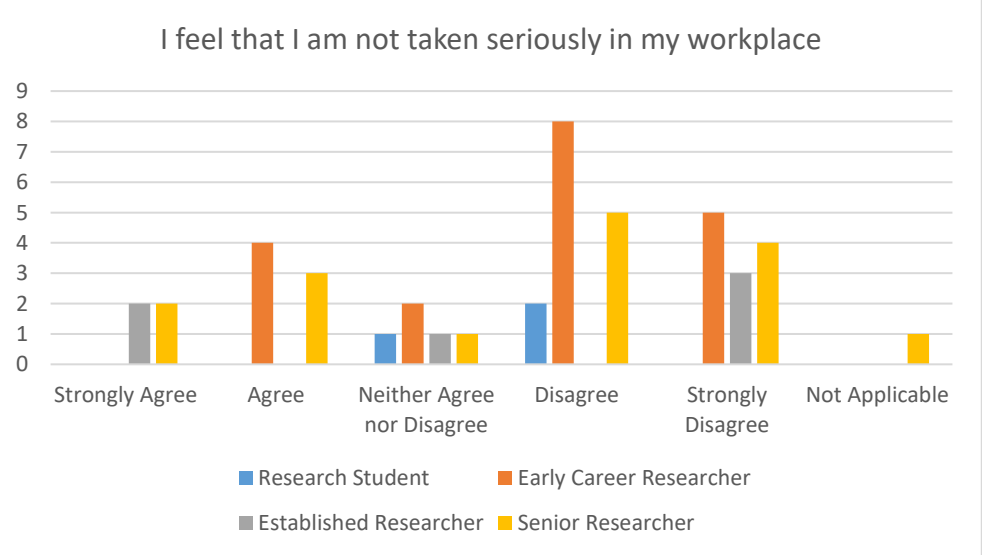


Figure 11: Career stage responses to statement (iv).



Of all the statements within the survey, the least applicable specifically cited barriers related to Right to Work, barriers for those not currently affiliated to the University, and maternity leave and caring responsibilities. This is not to say that these categories are not important and present significant issues for those within these identity groups, only that the majority of our survey population did not identify with these issues. For those who do experience these barriers, further details could be gleaned from the free text comments and identity characteristics.

For example, those who faced issues with their Right to Work (18.2% of our respondents answered 'Agree' or 'Strongly Agree') come from the full range of career stages, were equally split between permanent and fixed term contracts, had been in those roles across the full range of options from 'less than 6 months' up to 'more than 5 years', had both moved institution and also stayed at the same institution and in some cases stayed within the same department and even research group (but this was decidedly unconnected to length of service), and were a mix of ages, genders, religions and marital statuses. The only unifying feature was that all of these respondents stated they spoke at least one other language in addition to English. Respondents mentioned feeling unsafe, of the additional uncertainty, and made suggestions such as having diverse interview panels and 'buddies' to help colleagues through the difficult processes and support during these times of mental strain (25% of these respondents disclosed a mental health condition).

As another example, those who identified as having caring responsibilities (of any kind) were more likely to struggle with aspects of time and timing, but not universally. However, some respondents disclosed that they had left the sector whilst shouldering those caring responsibilities as research and/or academic careers 'were not compatible' with such duties, although they had now returned. Clearly the consequences of some barrier combinations are more than just uncomfortable or irksome, but can fundamentally change how a person chooses to spend large periods of their working life.

Conclusion

The barrier categories of Time & Timing and Communication and Information were most prevalent in our survey responses. Unwritten rules, hidden responsibilities and insufficient guidance all contributed to respondents feeling hampered to pursue a career in STEM research in our organisation. There were concerns over employment continuity, and opinions around belonging and community were polarised.

Our findings showed that respondents who identified as women and as early career researchers were more likely to feel the environment was less inclusive at our institution, identifying key contributing factors such as needing to work a second job and struggling with unwritten rules. Our study of intersectionality was limited due to the number of responses. With only 44 responses to analyse, this meant that there were characteristics which were not present in our respondent group, or were in such low numbers as to make any possible analysis statistically invalid. The 20% response rate was lower than envisioned, and on reflection this may have been due to the timing of the survey being close to other information requests. In the future, we would like to delve into intersectionality aspects further in the focus group exercise, to consider in more detail how the key barriers identified in this survey manifest in daily working life for members of our organisation.

We benefitted from respondents' thoughts on community identity and suggestions such as mentoring to help clarify requirements. We would like to further explore the critical role of line manager in this regard, as well as practical solutions to reduce administration and overwhelm.

Enhanced mentoring, clearer communication, and proactive inclusion strategies make up just some of the clear-cut interventions that can improve equity, wellbeing, and performance across research communities. Systemic barriers such as the prevalence of fixed-term contracts and competitive funding will need a joined-up approach to find a solution that does not make the situation worse for members of the research community who are already facing significant difficulties. We are excited to continue to work with colleagues internationally to improve research culture and the opportunities, sense of belonging, and quality of work life, for those who work within it.

Acknowledgements

We would like to acknowledge the Enhancing Research Culture fund from University of Warwick's National Centre for Research Culture, and also WMG's Summer Internship scheme. Many thanks to Pranav Jain for his expertise and support on Excel, statistics and data analysis.

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Figure 10: Gender responses to statement (iv).

Figure 11: Career stage responses to statement (i).

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Previously Chief Engineer responsible for part of the East Midlands electricity distribution network, Sarah Wilson now supports academics and researchers in WMG, one of two engineering departments at University of Warwick. From clarifying research strategies to finding funding to enact these, through to considering publication strategies and capturing arising impact from projects, Sarah leads a small dynamic team to enable the academic research lifecycle. A particular interest is in the career development of colleagues, and Sarah takes an active part in the department's mentoring, promotions and tenure processes as well as managing the fellowship pipeline and international activities.

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'One Year On': Reflections on the International Research Culture Conference 2024 (IRCC24)

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Abstract

Between the first and second International Research Culture Conference (IRCC), there has been increasing advocacy for improved research culture, evidenced through collaborative initiatives, networks and events aimed at addressing various challenges within research environments.

This reflection follows the International Research Culture Conference 2024 (IRCC24) and highlights significant developments leading up to it, detailing expanded participation and thematic diversity. Key takeaways from the conference included the influence of the Research Excellence Framework - People Culture and Environment pilot, the importance of continued collaboration and increased need for efficiency in this space. It concludes with reflections on future direction, advocating for continued collaboration, increased evaluation, and learning with and from international perspectives to foster meaningful improvement in research culture.

Keywords:
research culture; collaboration; international; networking; partnerships; knowledge exchange, research on research

Introduction

Last year's international research culture conference (IRCC23) lay strong foundations enabling connections and collaboration on research culture to develop. One year on, it has been clear to see that voices advocating for better research cultures are gaining traction, and more collaborative initiatives are emerging to test different approaches. Universities and other stakeholders are starting to share more regularly on their research culture endeavours, including through platforms such as the National Centre for Research Culture (NCRC) conversation series, the Research Culture Enablers Network (RCEN) and other regional networks and events. IRCC24 provided a timely landing space to reflect on where we all are in this journey.

An undercurrent of both the conference and the wider sector at the time, was the REF2029 People, Culture, and Environment (PCE) pilot. This was launched in early 2024, and had already begun to influence discussions—for better or worse—on how institutions would invest in and support research culture. In this reflection, we observe how the IRCC has evolved, key learning points, and considerations for the future

How Research Culture has evolved since IRCC23

In 2023, the People, Culture, and Environment (PCE) announcement and the introduction of new research culture roles left many institutions uncertain about definitions and REF implications, particularly with the shift in weighting from 15% to 25%. Following a consultation process, further debate led to the launch of a pilot to provide greater clarity.

By 2024, research culture activity saw significant growth, with many initiatives supported by Research England's Enhancing Research Culture Fund and RED Fund, as well as Wellcome's Institutional Funding for Research Culture. Wellcome's initiative trialled partial randomisation (**Lewis-Wilson et al., 2023**), categorising fundable applications into 'gold' and 'silver' categories, with silver selected at random. Key developments, including UKRI's Research Culture Initiatives report and development of a research culture framework (**Shift Insight, Vitae & UKRN, 2024**), PCE Indicators Project, and the wider adoption of CoARA and UKRN, have further enhanced the landscape.[i] There had also been growing recognition of contributions to research, with successful funding outcomes such as research technical professionals (**ITSS, 2024**). Other initiatives have continued to grow, including the Hidden REF[ii], PRISM network[iii], Research Culture Uncovered podcast[iv], Research Culture Enablers Network (RCEN)[v], and NCRC Conversation Series[vi]. ARMA's Research and Innovation Culture SIG[vii] also played an important role in amplifying diverse perspectives and sharing best practice.

A year on from its inception, RCEN published its first report (**RCEN, 2024**), outlining the professionalisation of research culture in the UK and the consolidation of thought leadership among its members. The network's commitment to collaboration remains strong, with a recent strategy meeting endorsing the pursuit of opportunities to drive meaningful impact.

International Research Culture Conference 2024 (IRCC24)

IRCC24 took place on Monday 16th September at the University of Warwick, hosted by the NCRC. It was attended by 250 participants in person, and over 250 participants online. Leading up to this, we saw abstract submissions rise from 35 in 2023 to 93 in 2024, evidencing the increase of programmes and initiatives exploring research culture challenges and solutions. Abstracts submitted were predominantly from different types of academic institutions, split across Russell Group, Post-92 and specialist, and included a small number of other public and third sector organisation abstracts. Table 1 illustrates the thematic areas in which abstracts were submitted, noting that ED&I and open research were the most popular topics submitted. This is unsurprising, considering the proportion of initiatives actively trying to improve culture in these two focussed areas (**Shift Insight et al., 2024**). However, it does pose questions on what work is being undertaken in some of the more underrepresented themes. This was observed at the conference with one delegate referring to bullying and harassment as the 'elephant in the room', with this challenge being more 'concealed' within institutions, even though it is reported as a prevalent issue (**Wellcome & Shift Learning, 2020**).

Table 1: Abstract themes submitted to IRCC24

ED&I issues in the research context	24
Open research	11
Career development of researchers	11
Wellbeing of researchers	7
Research enabler empowerment	6
Research leadership	6
Research support optimisation	6
Non-academic stakeholder involvement in research	5
Research integrity	5
Bullying and harassment in the research context	1
Improving reproducibility	1
Other	10
Total	**93**

IRCC23 took the first steps towards fostering connections and enabling collaboration between the sector, and in advocating for collaborative approaches to change rather than single institutions. We intended for IRCC24 to build on this in extending reach beyond higher education and succeeded in attracting delegates from funders, councils and the health service, as well as different roles from within the higher education sector. Growth was also apparent in geographical spread, attracting delegates from 24 countries globally including Abu Dhabi, Australia, Mexico, Kenya and Hungary (with a presentation being delivered from Pennsylvania University), demonstrating the increasing interest in research culture from a global lens.

The conference was shaped around three keynote sessions on crucial topics of what is needed to achieve research culture change, described as a 'cold bowl of spaghetti' (Shomari Lewis-Wilson, Wellcome Trust), research integrity as being central to culture (Louise Dunlop, UK Committee on Research Integrity), and developing and embedding inclusion (Dr Maisha Islam, University of Southampton). Additional parallel sessions took place throughout the day delivering 38 talks across 10 thematic areas, with a further 30 poster presentations (**see Appendix**).

With the high volume of excellent work being shared across these themes, it is challenging to synthesise this into a few words, however, there were several reflections that we took away from all the work being shared.

Collaboration is hard, but the rewards are rich

We know that collaboration in research culture is often challenging and demands time, trust and a willingness to compromise - but we also know that if done successfully, it leads to more innovative ideas, better inclusivity and a higher potential for impact. As highlighted in Shomari's opening talk, likening research culture to a 'cold bowl of spaghetti', where unravelling one research culture issue is complex because it is often meshed with many other strands, means collaboration is even more important to create those innovative solutions. We saw evidence of this happening at IRCC24, with examples presented on partnership building with the 'All-Island Network' initiative between University College Dublin and Queen's University Belfast (Colleen Thomas and colleagues), and from Cardiff University, University of Reading and Newcastle University who have been working on addressing disconnect between institutions on open research practices as part of the UK Reproducibility Network (UKRN) Open Research Programme (Karen Desborough, Robert Darby, and Candy Rowe).

Many attendees at the conference were also connected to the National Centre for Research Culture through its Research Culture Enablers Network (RCEN), which held a network meeting the day after the conference to pilot hybrid peer mentoring and road mapping activities. RCEN has mapped a wealth of existing expertise within the network, with a strong culture of generosity and a shared desire to exchange best practices. It has been heartening to see connections being made through the RCEN and at IRCC, where delegates are often facing the same challenges, and are able to generate creative ideas through engaging with like-minded, but also diverse communities, whilst also opening their work to critical peer input.

PCE pilot should not detract people from working towards focussed change

Discussions at IRCC24 unsurprisingly often touched upon the PCE pilot which was inevitable considering it is aiming to develop assessment processes '*to ensure appropriate recognition is given to the people, culture and environments that underpin a vibrant and sustainable UK research system.'* (**REF, 2029**). We heard from delegates that whilst the PCE element of REF has the potential to be a catalyst towards change, the commitment to change must come from within institutions, funders, publishers, and further, to generate long-term, sustainable impact. This is where good leadership, strategic networks, and top down/bottom-up culture initiatives will be crucial. Evaluation and sharing of practice whether good, bad or indifferent will also be fundamental to positive change, and in that regard, there was a definite sense at the conference that people were eager to continue to work together and not allow REF to ensure a culture of competitiveness. This might be a challenge, but we need to collectively discourage cherry picking of research culture initiatives that only showcase institutional strengths whilst concealing the areas that are more difficult to tackle.

Many of the presentations delivered at IRCC24 were evidencing innovative initiatives. Some were in the process of evaluating interventions whilst others were at the start of testing out new approaches – and all were equally important. Regardless of the stage of these projects, what's important is that concept of sharing, including what is more difficult to achieve but has potential for good impact. We must continually revisit why we are working towards improved culture in the first place – that is to provide quality environments in which research can thrive, leading to high quality results and societal impact.

The importance of efficiency

Another key reflection on IRCC24 was related to the efficiency of interventions and programmes of work to improve culture to create lasting benefits. With limited resources to utilise, participants at IRCC24 were keen to discuss across the thematic areas how best to achieve this. One example presented from Loughborough University (Stuart King, Elizabeth Gadd, Megan English) evidenced mapping across their various existing concordats and charter mark action plans to align and consolidate activities related to research culture. This approach was suggested so that institutions can reduce bureaucracy and duplication of effort between various people, departments and strategies. There are areas of activity where priorities may overlap with research culture endeavours such as career development, equity, diversity and inclusion and postgraduate research policies, that institutions should be aware of when developing their research culture strategies and action plans.

Sustaining successful research culture pilot initiatives into 'business as usual' may face barriers such as who takes ownership of them ('is there enough resource?'), and changes in behaviours ('it's the way we've always done things around here'). In facing financial insecurity across the sector, we increasingly need to look at ways we can innovate in the research culture space. This may, for example involve developing our understanding of where best practice already exists and role modelling these behaviours, reviewing policies and processes that affect the research community, and providing evidence of proof-of-concept projects which demonstrates improved financial and human cost value to senior leaders. This doesn't mean that we should ignore the more complex issues that require more resource – of course we need to continue to lobby for systems level change to the right stakeholder groups. However, a better understanding of where we can embed change within current constraints will be important in the short-term.

Looking to the Future

IRCC24 has grown in delegate numbers, types of roles and geographic spread, but is also evidenced through the wide array of positive initiatives being undertaken across the sector. As we move towards IRCC25, we should start to learn more from evaluation of initiatives, and where impact is starting to be tracked, and embedded. This will be important in starting to build an evidence base of what works, whilst acknowledging there will be differences across environments and disciplines.

The conference demonstrated an interest from other countries in what the UK is working on in this space, and at IRCC25 we hope to build on this to see what contextual differences there are globally, how we can start to

learn about diverse ways of improving research culture from further afield, and optimising opportunities to work together in this space.

Moreover, it will be important to continue to look at innovative ways of continuing to pilot new ideas – and how we can achieve this with current risks to availability of funding to support them. Whilst the future still feels uncertain in a lot of respects, we feel privileged to be able to continue to host an event that is supportive, where we can collaborate, and where we can exchange knowledge. We look forward to seeing what IRCC25 has to bring!

Marie Sams has 24+ years' experience in higher education, in professional service and teaching roles and has worked on international projects aimed at improving higher education experience. With a Doctorate in supporting women into leadership in higher education, she is passionate about culture change and making environments more inclusive. She is the Head of the National Centre for Research Culture, and leads on management of the Centre, including the NCRC roadmap, raising the visibility of research culture, and the International Research Culture conference. She has facilitated work in identifying institutional problem statements and shaped recommendations for improving wellbeing of early career researchers.

Although her background is in medical research (Microbiology PhD), Rika Nair has since applied her expertise to support a variety of disciplines and all stages of the research project cycle. At Warwick, she drives institutional research culture priorities, managing communities of practice, working groups to address key challenges, and initiatives that foster a vibrant interdisciplinary research environment. Rika is also the Network Lead for the Research Culture Enablers Network, which brings together over 230 colleagues from research culture teams to collaborate strategically on shared issues. She also actively promotes research culture opportunities and best practices through the LinkedIn group, Research Culture Knowledge Exchange.

Sotaro Kita is Professor in Department of Psychology, and a former Deputy Pro Vice Chancellor (Research), at the University of Warwick. He led the research culture strategy in the University from 2021-2024. Kita was also the founding Director for the National Centre for Research Culture, which facilitates coordination and collaboration among universities and other stakeholders. Kita founded the Ethnic Minority Researcher Careers Forum and Teaching Race Equality Taskforce, in the Department of Psychology.

Appendix: IRCC '24 Sessions & Speakers

Moreover, it will be important to continue to look at innovative ways of continuing to pilot new ideas – and how we can achieve this with current risks to availability of funding to support them. Whilst the future still feels uncertain in a lot of respects, we feel privileged to be able to continue to host an event that is supportive, where we can collaborate, and where we can exchange knowledge. We look forward to seeing what IRCC25 has to bring!

Opening Welcome

1. Professor Caroline Meyer - Pro-Vice Chancellor (Research), The University of Warwick
2. Professor Sotaro Kita - Deputy Pro-Vice Chancellor (Research) and Director of the National Centre for Research Culture, The University of Warwick

Plenary sessions

1. 'How do we work at scale in a research culture that's like a bowl of cold spaghetti?'
   Shomari Lewis-Wilson - Senior Manager (Research Culture and Communities), Wellcome Trust
2. 'Research integrity, the heart of research culture'
   Louise Dunlop - UK Committee on Research Integrity and Head of Research Governance and Ethics, Queens University Belfast
3. 'Developing inclusive research cultures for our academics of tomorrow'
   Dr Maisha Islam - Doctoral College Research Lead for Equality, Diversity and Inclusion, University of Southampton

Parallel Sessions and Workshops

Theme 1: Catalysing Research Culture Change at Scale

Ben Bleasdale, Karen Stroobants, *CultureBase Consulting*.10 years of defining research culture from the Nuffield Council report to the REF indicators

Robbie Clark, Gemma Derrick, Lorna Duncan, Pen-Yuan Hsing, Neil Jacobs, Rosalind Strang
University of Bristol. 'A lot of evidence percolates in through people's expertise....': How HEIs use meta-research in decision making for research culture change

Emma Spary, Samantha Aspinall and Katie Jones, University of Leeds. The Unnamed Research Culture Event

Colleen Thomas, Chris Browne, Gillian Boyle, Hugh Campbell, Sonya Deschenes, Hugh Fulham-McQuillan, Maura Hiney, Grace Mulcahy, Ivar McGrath, Adrian Ottewill, University College Dublin and Queen's University Belfast. The value of an All-Island Research Culture Network.

Theme 2: Removing barriers to inclusion

Prof Etlyn Kenny, Prof Chris Millward, Prof Yemisi Takwoingi, Dr Tish Kriznik, *University of Birmingham*. Race-inclusivity in research culture: UoB ASPIRE Project.

Dr Mark Whelan, *Queen Mary University of London*. Research Culture Data - Possibilities and Next Steps.

Dr Anna L. Seager; Elizabeth Kenny, *Swansea University*. Embedding Equity, Diversity and Inclusivity in your Research Delivery and Planning.

Helena French; Harry Moriaty; Jules Bellingham, *University of Nottingham*. Neurodivergent Employment Opportunities (NEO): A Positive Action Approach to Diversifying Research Teams within the Faculty of Science at the University of Nottingham.

Theme 3: Improving the PGR Experience for All

Dr Bing Lu; Dr Rebekah Smith McGloin; Lauren Russell; Dr Bamba Khan; Owen Gower; Julie Sheldon; Scott Foster. *Nottingham Trent University*. Developing Inclusive Postgraduate Admissions.

Cat Jones, Chris Guerin, Azizul Haque, Sarah Emmerson, Louise Rixon, Chinyere Magulike, Rachel Rowntree & Olympia Palikara, University of Warwick. Supporting part time PGR students through a co-designed residential writing retreat.

Dr Alice Beck; Dr Vitalie Duporge, *The Cabot Institute University of Bristol*. Cultivating Community Among Postgraduate Researchers (PGRs): Leveraging Peer Support Resources for Enhanced Cohort Collaboration.

Dr Shi Ha; Gabriella Crawford Koltai; Maryam Masood; Asima Iqbal; Ninna Makrinov, *University of Warwick*, Enhancing inter-cultural awareness among international postgraduate researchers and their research supervisors at Warwick.

Theme 4: Promoting Reproducibility and Research Integrity

Catherine L. Winchester, *CRUK Scotland Institute*. Facilitating the publishing of reproducible and high-quality research.

Queen Saikia, Dr Jonny Coates, *University of Leeds*. Preprints: Bridging the Gap Between 'Positive' and 'Negative' Research Outcomes.

Dr Karen Desborough, Robert Darby, Prof Candy Rowe, Cardiff University, University of Reading, Newcastle University. Helping institutions incentivise Open Research through reward and recognition of transparent research practices at the OR4 project.

Dr Tatiana Chakravorti; Sai Koneru; Dr Sarah Rajtmajer. *Pennsylvania State University*. Reproducibility, Replicability, and Transparency in Research: What 452 Professors Think in Universities across the USA and India.

Theme 5: Changing Research Leadership

Laura Hutchinson; Samantha King; Ellen Cole, *Northumbria University*. Research Group Leadership: Mobilising research leads for culture change.

Dr Laura Fenner, *University College London*. UCL Women and Large Grant Leadership training programme.

Sophie Daniels; Johanna Thren, *Durham University*. The Use of Shadow Committees to Reimagine Governance for a Flourishing Research Culture.

Dr Elizabeth Morrow, Prof Meg Jensen, Prof Cilla Harries, Dr Jackie McRae, *Kingston University*. Precision Mentorship for Research Leadership: A Pilot Programme in Arts and Humanities at Kingston University.

Theme 6: How do we Cultivate Thriving Research Communities?

Jenny Winsland, *University of Oxford.* Research Culture Toolkit: University of Oxford's initiative to map and support local research cultures.

Hugh Fulham-McQuillan, Gillian Boyle, Hugh Campbell, Maura Hiney, Grace Mulcahy, Ivar McGrath, Adrian Ottewill, Colleen Thomas, Sonya Deschenes, *University College Dublin*. Mental Health and Wellbeing in a Research Community: Preliminary Findings on the Role of Research Culture.

Catherine Davies, Fiona McClement, Marije Davidson, Paul Chadwick, University of Leeds, University College London. "If you were designing a system to encourage bullying and incivility, it would look like a modern University." Using behavioural science to investigate drivers of unacceptable behaviour in research culture.

Stuart King, Elizabeth Gadd, Megan English, *Loughborough University*. Concordat Consolidation at Loughborough University: Mapping our efforts to improve research and innovation cultures.

Theme 7: Research Culture beyond UK HEIs

Lorelei Silvester, *Liverpool Tropical School of Medicine*, Enabling equitable partnerships through support to research management and communication.

Dr Nicholas Mithen, *University of Hull*. Two Research Cultures? Coproduction as insurgence.

Wanlin Cai; Prof Alis Oancea; Alieen Marshall-Brown, *University of Oxford*. The Responsible Knowledge Exchange, Engagement and Impact framework and principles.

Theme 8: Valuing Diverse Contribution

Sarah Wilson; Dr Mel Loveridge; Dr Connie Qian; Dr Giulia Lorenzi; Dr Ali Zaidi, *WMG, University of Warwick*. Breaking Bad Barriers to Pursuing Research: A Concordat to Research Equity.

Dr Charlotte Verney; Helen Curtis, *University of Bristol*. Professional services researchers - invisible researchers in the academy?

Fleur Hughes, *University of York*. PRISMs: Agents and Beneficiaries of Positive Research Culture.

Mariam Yacoub, Mollie Etheridge, Susie Bass, University of Kent, University of Cambridge. (Re)crafting Research Culture.

Theme 9: Advancing Open Research Approaches

Samantha Broadhead, Henry Gonnet, *Leeds Arts University.* Creative dilemmas: Balancing access and integrity.

Tom Morley, *Lancaster University*. Academic Libraries as Trailblazers: Research Culture and Open Access Monographs.

Emily Wild, Tim Fellows, *Jisc*. Sharing research early and openly with Octopus.ac.

Theme 10: Challenges in Research Career Development

Noam Tal-Perry; Lara Abel; Kate Murray; Mollie Etheridge; Becky Ioppolo; Katherine Dawson; Marie Collier; Debbie Birkett; Liz Simmonds; Steven Wooding, *University of Cambridge.* What do early career researchers value in their jobs? A mixed methods study to inform discrete choice experiments on academic job preferences.

Connie Wan; Amanda Chukwudozie, *University of Nottingham*. Mid-Career Researcher Development: Navigating the Landscape.

Catalina Bastidas; Prof Jemina Napier, Heriot-Watt University. Driving Culture Change: The Power of Narrative CVs.

Dr Marie Collier, Katherine Dawson, Katie Murray, Justyna Bandola-Gill, University of Cambridge, University of Birmingham. Building support for reviewing and writing Narrative CVs.

Posters

Joseph Angus Corneli, Neil Jacobs, Oxford Brookes University. A community of practice for open research trainers.

Dapo Awobeku, Anthony Muchai Manyara, *University of Bristol.* Responding to visa and passport inequities for equitable research partnerships with Global South: A case study of the University of Bristol.

Vicki Belt, *University of Warwick*. Impact through interdisciplinarity at the Enterprise Research Centre.

Carola Boehm, Josie Beech, Ravinder Kaur, Staffordshire University. From research to policy to practice: Minimising Exclusionary Structural Barriers for Research Environments

Kerry Broom, Dimitris Evangelopoulous, Angela Lewis, Ruthie Parsons, Kirsti Hornigold, Anastasia Ioakeimidou, Ami Bhavsar, Matthew D Wright, Liz Ainsbury, Frédéric B. Piel, UK Health Security Agency. Co-production of a Training Programme to improve research culture and EDI across multiple institutions.

Craig Carnegie, Helena Verrill, Rebecca Nealon, *University of Warwick*. Addressing social mobility issues in STEM: Expanding a departmental approach to work experience through a cross-faculty research culture partnership.

Catherine Davies, Holly Ingram, *University of Leeds*. Sceptics and champions: Participant insights on the use of partial randomisation to allocate research culture funding.

Lina al Jabbar, Roz Stanton, Chris Howls, Heather Mackenzie, Tracey Newman, Lilian Odaro, Nandini Das, *University of Southampton*. The Supervisor and Postgraduate (PGR) Partnership Agreement.

Banaz Jalil, *University College London*. Best Practice in the chemical characterisation of extracts used in pharmacological and toxicological research: 'The ConPhyMP' Guidelines and Open Access Tool.

Karisha Kimone George, Silvia Mantilla-Wright; Trish Chinzara, *University of York*. Outlining the development of an EDI Research Centre at the University of York.

Sotaro Kita, Marie Sams, Victoria Strudwick, *University of Warwick*. The vision for the National Centre for Research Culture at the University of Warwick.

Sotaro Kita, Vicky Strudwick, *University of Warwick*. Warwick PATHWAY Programme: a positive action programme to facilitate Black researchers' career.

Anna Korzeniowska, *University of Surrey*. Reforming research assessment to incentivize Open Research practices - where have we been and where are we going?

Natasha Kriznik, Dr Ipshita Ghose, Professor Chris Millward, Dr Zania Stamataki and Professor Ed Wilding. Rethinking research leadership at the University of Birmingham

Yanyan Li, Xinran Gao, *University of Warwick*. Enhancing Public Engagement: Inclusive Communication Strategies for Academic Research

Anthony Muchai Manyara, *University of Bristol.* Toolkit to promote equitable budget allocations for Global South research projects.

Grace Mulcahy, Gilian Boyle, Adrian Ottewill, *University College Dublin*. The Research Integrity/Research Culture Interface - Experience from a large, research-intensive University.

Clarissa Muller, Giulia Lorenzi, *University of Warwick*. Reflections on 'Pathways in Research: Building Resilience and Collaborations': a professional development & community-building event in the Department of Philosophy.

Alex Payne-Dwyer, Victoria Noble, Amber Yeoman, Ryan Pound, Tim Passchier, Fleur Hughes, James Sherwood, Alex Pike, Andrew Holding, Cobus Smit, Jamieson Howard, Lianne Lansink, Liz Rylott, Vanessa Keller, Michael Plevin, Stephanie Ellis and Ines Hahn, *University of York.* Celebrating what we already have: new cross-disciplinary initiatives at York.

Aneita Pringle, Louise Pacelli, Zoe Kennedy, Robert Patterson, *King's College London*. Exploring Culture, Equity, Diversity and Inclusion (CEDI) and career development practices, gaps, and solutions at a London university

Clementina Ramirez Marengo, Vera Matser, Emma Karoune, Matthew Forshaw, Luis Santos and Ann-Marie Mallon, *The Alan Turing Institute*. Bridging the Skills Gap in People in Data.

Dr Harriet Richmond; Charlotte Marshall, *University of Warwick, University of Northampton*. Hidden in Plain Sight: Research Culture and the Researcher Experience

Ellis Ryan, *University of Warwick*. The role of Warwick's Social Mobility Student Research Hub in fostering inclusion in the research space.

Zaynab Seedat, *University of York*. Valuing Voices: A Toolkit for Equitable and Responsible Research.

Richard Smith, Ayten Alibaba, Joana Almeida, Kieran File, Elyanora Menglieva, Miriam Schwiening, Lila Tennent, Yvette Wang and Emma Williams, *University of Warwick*. Countering silos and hierarchies through peer-to-peer research-in-progress conversations.

Marianne Talbot, University of Leeds. The collective experience of developing and presenting our paper at the BERA ECR Annual Conference in June 2024: "Navigating Collective Academic Development: A Case Study of the Activity of the Editorial Board of a Community Academic Journal."

Marianne Talbot, Ruth Winden, *University of Leeds.* Becoming a Mature Postgraduate Researcher: Challenges and Rewards.

Steven Vidovic, *University of Southampton*. ORACLE: an early intervention to embed Open Research practice in research projects.

Xin Xu, Alis Oancea, Jess Pilgrim-Brown, Chang Shen, Farzana Chowdhury, Farzana Begum
University of Oxford, University College London, Manchester Metropolitan University. Diverse contributions to research: Understanding and recognising the allocation of credit in educational research.

Mariam Yacoub, *University of Kent*. To be, or not to be, in the ivory tower: An ethnographic inquiry of being and becoming in higher education in the physical sciences.

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Endnotes

[i] Available at: https://coara.eu/ and https://ukrn.github.io/ respectively.

[ii] Available at: https://hidden-ref.org/.

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Facilitating Practice-Led Research Culture in Initial Teacher Training: The case of Agile Research Teams (ARTs)

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Abstract

This critical reflection examines how a team of academics began to tackle the challenge of developing research culture among their professions-facing colleagues through two interconnected initiatives. It presents the theoretical underpinning of Facilitated Practice-based Research (FPR ©University of Sunderland) and its practical implementation through Research Culture Roundtable (RCR) events and subsequent formation of Agile Research Teams (ARTs). Drawing on contemporary debates around research excellence and practitioner-researcher identity, it explores how structured collaboration can support academics in integrating their practical and scholarly expertise. The ARTs model enables manageable, time-bound participation in research projects while building sustainable research capacity. Initial outcomes demonstrate the potential of this approach for developing research confidence and creating a more inclusive research community. The authors conclude that supporting practitioner-researchers through facilitated, practice-led initiatives can enhance both individual development and institutional research culture, particularly in teaching-intensive settings.

Keywords: facilitated practice-based research; practice-led research; practitioner research; academic identity; collaborative research; research capacity building; agile research teams; sketchnotes

Introduction: NOT 'just a teacher'

The transition from professions-facing practitioner to research-active academic represents a significant shift in how individuals position themselves within higher education. Those entering academia from professional backgrounds such as teaching, health or social work must navigate the distinctive demands of both domains - maintaining their practitioner expertise while also developing their scholarly identity (**Hidson, 2024**). The expectations around research engagement present particular challenges for these staff members, who must learn to make effective use of allocated research and scholarly activity time while translating their substantial practical knowledge into academic frameworks.

Research indicates that integrating these dual aspects of professional identity can enhance rather than diminish both roles. Studies by Murray (**2010**), McLean and Price (**2017**) and Fox and Poultney (**2020**) demonstrate that practitioners can successfully synthesise their practical expertise with academic scholarship when supported through structured collaboration. This is particularly effective when facilitated through communities of practice where experienced colleagues can share insights from their own transitional journeys. The various studies focused on teachers' belonging, identities and support by Fox (**cited in Fox and Poultney, 2020**) have particular relevance to the teacher educator community in the current Agile Research Teams (ARTs) example. The importance of the environment and context in the development of teachers as researchers is further emphasised by Postholm (**2009: 564**) 'in providing a stage' on which to play out these roles.

The significance of this integration extends beyond individual development to contribute to broader institutional research culture. Just as pedagogic research has historically struggled for recognition (**Cotton, et al., 2018**), practitioner research conducted by professions-facing academics requires acknowledgment of its distinctive purpose and contribution. These academics bring valuable insights from professional practice that can inform both teaching and research, with the potential to build what Murray (**2010: 106**) described as 'a new type of "research capacity" in teacher education'.

This understanding has particular relevance for developing sustainable research cultures within teacher education departments. By recognising the complementary nature of practical and academic expertise, institutions can better support staff in developing research identities that build on, rather than compete with, their professional knowledge base. If Corner's (**2023**) call for a more holistic approach to research excellence is to be embraced by teaching-intensive institutions, then logically it needs

to begin at the grass roots with professions-facing departments. Resolving the uncertainties of dual-role professionals' academic identities opens up their capacity to contribute to the people, culture and environment aspect of research excellence piloted for the 2029 Research Excellence Framework (**UKRI, 2025**).

This critical reflection presents the journey so far taken by a team in one such professions-facing faculty, with a view to developing the infrastructure to support a more inclusive and collaborative research culture amongst teacher educators, who may initially identify 'just' as teachers, let alone as teacher educators, academics or researchers. It firstly sets out its Facilitated Practice-based Research (FPR) theoretical disposition, which underpinned the ARTs research capacity-building model. It concludes with an analysis of outcomes and critical insights.

Theoretical Disposition: Facilitated Practice-based Research (FPR)

Central to researcher development is understanding and articulating core concepts such as researcher positionality, epistemology, ontology, methodology and data analysis. The key tenet of Deacon's (**2022, 2023**) Facilitated Practice-based Research (FPR) model requires initially demystifying the abstract language used to frame research in order to bring it in line with the practices that practitioners already employed. For teachers, translating practice terminology such as 'lesson observation' or 'learning walk' and articulating the connection between observational and reflective practices in schools and in research allows practitioners to recognise that they possess many research skills already but simply use different terms to describe them. Deacon (**2023**) advocates for a temporary setting aside of formal research terminology until it is gradually reintroduced as part of the scaffolded support provided through facilitation.

An associated issue with traditional academic language is the potential to reinforce the power imbalances inherent in research communities. Murray (**2010: 98**) warned of the 'bifurcation between those who teach and those who research', suggesting that the prevailing discourse of either teaching or research in higher education discourages teacher educators developing an integrated understanding of their academic identities. Despite engaging in further postgraduate study, usually expected as part of professional development, Deacon (**2023**) suggests that this research anxiety is often an issue of confidence rather than understanding or ability, and can further compound the identity problem. 'Imposter syndrome', much debated in relation to identity positioning in academic transitions (**McLean & Price, 2017**) can lead to expert practitioners reverting to

feelings of novice status and 'lurking' in communities of practice, self-selecting out and habituating research anxiety. This power and identity problem is acknowledged by Wyse et al., (**2018**): that close-to-practice research of the kind valued by professions-facing academics is also perceived - by them and by the academy - to be 'far down' in the Research Excellence Framework (REF) hierarchy. Wyse et al., (**Ibid**) also found a significantly higher proportion of lower-graded outputs in education than in other REF units as well the lowest proportion of staff submitted for evaluation. It begs the question as to whether 'imposter syndrome' might actually be a legitimate situational symptom to the prevailing expectations around research.

Imposter syndrome and research anxiety may actually be less about individual psychology and more about structural issues in how research environments are designed or how researchers are trained and supported. Deacon's FPR model proposes a collaborative networked approach to nurturing emerging research culture with scaffolded facilitation of projects that emerge from practice. The emphasis on 'first focusing on human flourishing and critical reflection through reflexivity in a 'high challenge with high support' environment' (**Deacon, 2022: 2**) provided a conceptual springboard for planning two concurrent elements of a research culture development plan, outlined next. The issue of research anxiety is a core element underpinning its development. Although Deacon has a background in social work, she shares similarities with those in teaching when moving from a practice to an HE environment.

Research anxiety was a key underpinning element of this. In 1987, **Epstein** wrote 'no other part of the...curriculum has been so consistently met with as much groaning, moaning, eye rolling, hyperventilation and waiver-strategizing as the research course' (Ibid: 71). Although efforts have been made to address this within social work research, Epstein (**2016**) emphasised that research anxiety persists. In conceptualising this social phenomena, Deacon (**2022, 2023**) drew on the work of social theorist Pierre Bourdieu (**1998**; **Bourdieu & Wacquant, 1992**). Drawing on Bourdieu's theory, it is posited that practitioners internalise research anxiety through the struggles they experience within specific social fields, such as the academic research field. Deacon (**2023**) argues that the social work research field is dominated by those who possess economic, cultural social and symbolic capital, such as HEIs. To maintain this power, language becomes intellectualised - an effect which, Deacon (**Ibid**) argues, positions practitioners as separate from researchers, casting them as consumers of research. Within this field, practitioners are habituated (i.e., socialised into habit formation) in ways that position themselves as separate from research, a dynamic that manifests as research anxiety. It is not suggested that this is a conscious strategy but this positioning of practitioners as not

researchers presents a barrier to those practitioners believing they can become researchers. In this article, we argue that this shares similarities with the field of education practice and education research.

The Research Culture Roundtable (RCR): Understanding our community

Rather than simply distributing an online survey for analysis, the first stage of the research culture development plan introduced a mechanism to encourage practitioner participation in a research event, as part of a move toward full participation, aligning with Lave & Wenger's (**1991**) concept of situated learning. This would encourage 'legitimate peripheral participation', a key to continued future engagement.

Sketchnotes as visual research method

Sketchnotes have begun to attract academic attention in research, most often the result of live illustration during an event. For example, Persad (**2024**) facilitated a series of 'Research Culture Cafés' with the support of an external 'graphic recorder' both as a lasting record and to encourage their community to engage with the content. This, alongside use of sketchnotes at the British Educational Research Association 2023 conference, amongst others, provided an initial stimulus for using sketchnotes. Baff (**2020**) and Vasconcelos et al., (**2024**) have pointed to the benefits of combining creativity with analytical thinking, although in each of their studies the artist was also an author. Fernández-Fontecha et al., (**2019**) studied a set of scientific sketchnotes to explore the way that they make complex scientific information accessible through a re-making of meaning process termed 'resemiotization'. Although Fernández-Fontecha et al., (**Ibid**) highlight visual thinking as an emerging practice, visual methods have long held prominence in educational research, particularly with children and young people due to its inclusivity (**Wall, 2017**). Methodologically, Wall points out that while drawing-mediated methods could be 'generally described as survey instruments, they also represent different ways of incorporating and using the visual to aid … elicitation'. The 'Research Culture Roundtable' (RCR) event provided an ideal opportunity to use the sketchnote medium to co-construct as well as record, thereby using sketchnotes as a democratising visual research method as well as an outcome.

The benefit of being able to capture different viewpoints and contributions using live illustration aligned well with our researchers' positionality as practitioner researchers often operating in a liminal space between research and practice, aiming to reduce that distance for our communities. The three authors of this paper are practitioner researchers, each with a professional background in education or social work prior to entering

higher education to research and teach fellow practitioners. Recognising ourselves as insider researchers, as co-participants as well as facilitators in the event, we felt that our reflexivity and transparency were in fact key to the validity of the research. We did not wish to 'other' ourselves by attempting to study our colleagues without participating. The research question for the RCR event (What are the perceived challenges and opportunities for being research active in our faculty?) were created from our perspective as insider researchers and were as real for each of us as for our colleagues. We felt the potential impact of our involvement on the process and outcomes would be mitigated to a large extent by having the external facilitator capturing the process and then sharing the sketchnotes at the end for all participants to review.

The RCR was therefore designed with three purposes:

- To bring together colleagues in the faculty to connect, network, discuss and appreciate the diversity of research interests.
- To act as an exploratory focus group, gathering insights into research culture and associated knowledge exchange trajectory, opportunities and challenges, so that these could inform the faculty research plan and provide a stimulus for future researcher development activity.
- To capture, synthesise and disseminate the findings as tangible and visual assets via live graphic recording and co-constructed outputs developed in collaboration with participants.

Methodologically, one in-person session and one online session were held to make the project as inclusive as possible. Ethical approval was granted by the university's ethics committee. A combined participant information and consent form was created to model the process of setting up a research activity. For the RCR this involved capturing demographic information, research interests, and consent for participating in the process as a form of exploratory research. The information explained that the outcomes would be visual sketchnotes and summaries that could be used in other outputs.

The in-person session began with a brief introduction, after which participants were asked to look at the various printed prompt sheets (see '20 Questions' in appendix) around the room, discussing them collaboratively and contributing ideas, thoughts and questions, while the graphic artist produced live illustrations. Collaborating with the external sketchnote artist allowed for rapid data capture, with the artist resemiotising (**Fernández-Fontecha et al., 2019**) the interactions and utterances of the participants and producing a thematic visual overview supported by participant quotes. Although Vasconcelos et al., (**2024**)

critique the power dynamics inherent in the person holding the pen, capturing the entire process in real-time via screen recording enabled us to trace the development of shared understanding and collaborative review of the final output at the end of the session.

The research team observed that the use of sketchnotes fostered a 'low arousal' environment that helped level the playing field by reducing participants' anxiety and stress, thereby facilitating more equitable engagement. This environment encouraged participants to speak openly about their challenges and struggles with research. A sense of equality within the process was considered essential to the integrity of this study.

Figure 1 shows the final illustration from the in-person session. Following the research element, the Agile Research Teams initiative was introduced, and participants invited to join up.

Figure 1: Live illustration captured from in-person Research Roundtable © University of Sunderland.

The sketchnote session created a baseline for understanding the community of professionals. A range of challenges and concerns were identified that could be addressed via the Agile Research Teams: the gap between research and practice, the need for time, funding, emotional support, mentoring and confidence to engage with research opportunities. Issues of imposter syndrome and the 'othering' of identities all echoed the findings of Kincheloe (**2003**), Murray (**2010**) and McLean and Price (**2017**). Both concepts emerge within a culture where research is viewed as something that 'others' do. The sketchnote session created a sense of belonging where all views were heard and validated. It is arguably more difficult to experience imposter feelings when one's view are shared

by and resonate with the collective. The interactive and visible nature of the sketchnote process, as it captured the comments and opinions 'live', helped to limit scholarly isolation and individualism often associated with research culture in universities (**Cristea & Babajide, 2022**). The community of professionals could see themselves as actively informing the opportunities for cultural change.

After the session, the written sheets were transcribed and analysed thematically. Having set the scene for responses by providing the 20 Questions prompts (**see Appendix**), the sketchnote was compared to the themes. It was noted that some elements were emphasised, such as the research culture and challenges, support needs and opportunities, while specific research interests, research successes, and detailed training needs were omitted from the sketchnote. The sketchnote effectively illustrated key emotional concerns (imposter syndrome, fear, frustration with time constraints) while providing a more solution-oriented approach in the opportunities section being offered by the ARTs, which were shared towards the end of the session. The sketchnote captured the emotional essence and major practical concerns, while necessarily simplifying the rich diversity of research interests and methodological preferences expressed in the handwritten materials. This resemiotisation of the session (**Fernández-Fontecha et al., 2019**) emphasised the most strongly emphasised themes, leaving the deeper detail for the research team to explore further (**see Hidson, Duffy & Deacon**, **in press**).

A central theme emerging was that teachers and social workers transitioning into academia share similar experiences. Often when entering the university, they possess substantial professional experience and therefore have a more secure identity. Coming into the university usually repositions them at the 'bottom' in terms of expertise as they navigate an unfamiliar working environment. This transition is complex and means some people can hold onto their previous identity more tightly: I am *still* a teacher; I am *still* a social worker. Research adds an additional layer of complexity, perceived as secondary to teaching in a professions-facing institution. As a result, individuals tend to maintain their core identity within their original professional role.

Research cultures do not routinely seem to acknowledge the novice elements of professional academics, i.e., those who join from another profession. They tend to begin with those who may already have begun the transition either through ongoing postgraduate study or as early career researchers. Participants such as these are left to 'work it out' for themselves, therefore lacking support and scaffolded learning. FPR is about reframing existing skills: research is embedded in everything from searching online to reading health reports, population surveys or school-

level data, and therefore embedded into professional life. The core issue for transitioning professionals is about learning to engage critically with what research is legitimate and what is opinion or assertion. For teacher educators such as these, this also translates into a need to be credible when encouraging trainee teachers to engage in research. The impact on the civic and scholarly missions of HE should not be underestimated. A culture of inquiry, curiosity and collaboration within a professions-facing, teaching-intensive university can positively affect student outcomes both in terms of market logics, metrics and pedagogic relationships.

Implementing Agile Research Teams (ARTs)

In order to boost the institutional research culture in a professions-facing faculty following on from the RCR exercise, the aim was to explore whether supporting and developing participants' skills through ARTs could increase capacity and confidence to engage in research. The ART is inclusive as it allows colleagues to contribute in a way that is task-bound, manageable within their available time and in line with their preferences for working. It draws upon their specific skills sets, disciplinary knowledge, interests and values. The facilitation aspect provides oversight to ensure that the research is quality-assured, which also develops research leadership skills within the team.

The ARTs initiative was designed with three purposes:

- To create a manageable and sustainable continuum of credible research activity among practitioners.
- To establish, support and build researcher relationships across teams and disciplines, bringing together diverse expertise, valuing the process of relational opportunities within 'Research & Knowledge Exchange' (RKE) as much as the product of the process.
- To urgently increase capacity to support 'live' current research projects.

The model for an ARTs project is that a member of staff brings the idea to the group. They break down the research into viable tasks. These are discussed and distributed based on the availability of various members of the group. In one project, this involved sending pairs to a school to interview teachers about what had been done in a project and feeding that data back into the project team. In another, a participant introduced an idea to the team, who then offered suggestions for next steps and facilitated involvement of additional contributors. The model is flexible and scalable, with the intention that the research will be co-constructed

and the concurrent tasks can be completed at each stage, allowing the overall project to progress.

Table 1: ARTs projects established in 2024/25.

Intensive Teaching and Practice (ITaP)	Evaluating pedagogical innovation in initial teacher education programme.
Feedforward Assessment	Impact of our feedforward targets for improving HE students' performance – collaboration between two universities.
Mini Mind	Interdisciplinary, working with external partners and schools to develop positive psychology practice in primary schools.
Enabling Student Journey	Continuation of a fellowship award around disability awareness across the faculty.
EYFS curriculum design for school readiness	Working with a private nursery on curriculum literacy.
Vocabulary practice	Developing impactful vocabulary practice across primary schools in a Multi Academy Trust.
Pondering Phonics	Comparative case studies of different DfE validated Phonics Schemes.

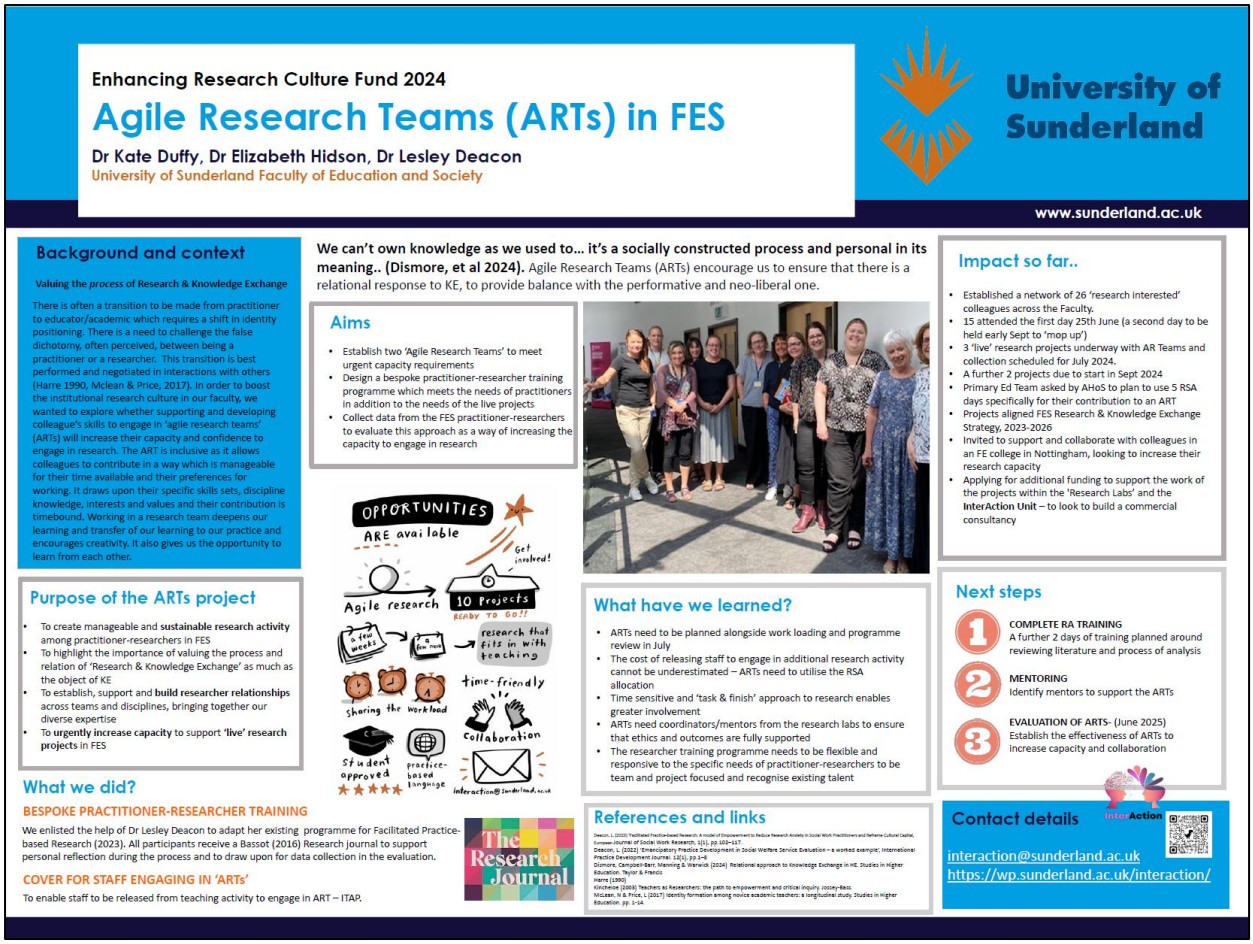
Agile Research Teams (ARTs) outcomes so far

The ARTs initiative's success stems from its flexible, task-focused structure that allows participants to become involved dependent on their capacity. This allowed for pairs of participants to carry out research tasks such as school visits, or thematic analysis of one interview, and contribute that part to the overall project. At the time of writing, the project reports and other associated outcomes from the first live ARTs project are still in development, but all contributions will be acknowledged, which will see a rise in authored outputs in the department, often the very first experience of publication for some of the participants.

While research outputs are problematic especially when connected to the REF in terms of creating a hierarchy via the star rating, the collaborative and collegiate approach espoused here aims to facilitate and reward a collective research and authoring culture. While some outputs can be critiqued by practitioners as written by researchers for other researchers, participants in these initiatives also want to ensure that their research can be applied in practice by other teachers and social workers. This means that the work needs to be clear and accessible and therefore neither solely in the symbolic language of research, nor only accessed via traditional scholarly publication pathways.

The initiative's effectiveness is evidenced by the engagement of 26 'research interested' colleagues across the faculty, resulting in a range of research projects and several more scheduled (**Table 1**). Notably, this approach led one team leader note only to lead by example through participation, but also to allocate specific Research and Scholarly Activity days on workload allocation for ARTs participation, incorporating research objectives into annual academic appraisal, ensuring sustainability.

Figure 2: Poster sharing Agile Research Teams development in 2024.



Some of this activity has been reported on by Hidson and Duffy (**2024**), generating interest from other institutions and external practitioners. Figure 2 also shows a poster shared at an internal dissemination event (**Duffy et al., 2024**).

Reflections

Our approach to creating ARTs differs from the way the concept has been applied in fields such as marketing, health and sciences. The authors hold the position that we can't 'own' knowledge in the ways that have been the case historically. Knowledge creation is a socially constructed process and personal in its meaning (**Dismore et al., 2024**), which is visible in the contextualised way that research knowledge has been facilitated via these initiatives. ARTs encourage us to ensure that there is a relational response to knowledge exchange, to provide balance with the performative and neo-liberal agendas.

Our work aims to build upon the early work of Tynan and Garbett (**2007**) in fostering collaborative research practices by focusing specifically on the barriers faced for dual-role professionals in academia. Several specific mechanisms have been implemented to address power imbalances and

promote a more equitable and relational research culture. We concur with Feng et al., (**2023**) and Hickey et al., (**2023**) that enacting a relational approach to knowledge exchange, or any academic development, needs institutional support, which remains challenging within the current HE agenda.

Early findings suggest that the democratic formation of ARTs is contributing to a reduction in research anxiety among participants. The team is guided by a 'facilitator' whose role is to ensure that the views and ideas of all collaborators are captured. The only stipulation is that each group convenes or communicates regularly which has generally resulted in monthly meetings. In five of the seven current projects, there was a gradual introduction of deadlines and tasks to be completed. Early meetings focused on building trust and sharing views, experiences, ideas and interests in the research area. This collaborative foundation enabled colleagues to collectively establish task deadlines based on their discussion and reflections. Facilitating a change in culture must allow time for dual professionals to make the alignment between their positioning as teachers and social workers to academic researchers in their field, with the capacity to create knowledge rather than simply consume or re-state it. The setting of small tasks to be worked upon between meetings has been essential to making progress. Progress is not about 'task and finish' in the early months, it's about checking in and feeling able to say, 'I haven't managed to get it all done, but I managed *this'*. Incremental progress, i.e., managing *something,* is more than would have happened without the team. Two of the earlier established teams are now gaining pace after several meetings. Key messages for ARTs as a process for academic development include:

- Time to engage with an ART must be embedded into academic workloads
- Supporting a relational approach to academic development and knowledge exchange requires time and trust to foster cultural transformation

Recognising that leading research and knowledge exchange activity happens at all levels of academia. As with all research and initiatives, limitations of the ART model have been identified. The challenge of sustaining momentum beyond initial enthusiasm and 'quick wins' is one that will need to be monitored if the initiative is to be embedded in the ways of working within and outwith the institution. In the current difficult climate both in higher education and in schools, there are also resource implications for staff, along with succession planning, onboarding new staff, long-term management of data, analysis and momentum towards dissemination and outputs. Within this bubble of goodwill, there will also need to be an ethical strategy for acknowledging contributions from staff

who may move on from the project. The British Educational Research Association (**BERA, 2024**) is clear that collaborative research such as in this case, that all who have made a contribution should be credited or acknowledged. This provides a challenge to traditional concepts of first authorship and participant anonymity, troublesome ideas in participatory approaches.

Critical consideration also needs to be given to balancing inclusivity with research quality. The FPR model is based on facilitation by a knowledgeable facilitator. Despite the democratic and flat structure of power within a group such as this, there must be, for the sake of research quality, a level of accountability and quality assurance. It will be vital to ensure that the outputs reach a level of quality that can be deemed equivalent to more standard approaches, which tend to be led by a Principal Investigator or Co-Investigators, working to a transparent project plan that can withstand academic peer-review. Even solo postgraduate researchers have supervisors and academic monitoring, and all research must demonstrate its ethical credentials: in the case of education research, to the 'community of educational researchers' in line with the BERA (**2024**) ethical guidelines. There must be an ethical and quality assurance fulcrum, albeit one that is neither gatekeeper nor barrier but is centred around the understanding that no transfer of knowledge happens without a strong relational foundation (**Sidorkin, 2022**).

Questions of scalability and transferability have also warranted discussion in relation to ARTs. The model itself has value and is manageable within the dimensions described here. Replication elsewhere would be a compliment to the initiative, but interdisciplinarity and cross-disciplinary approaches may require a different approach. How might different disciplines conceptualise and operationalise research approaches inspired by this initiative's vision of the transformative potential of structured collaboration? In a professions-facing team such as this, opportunities for colleague growth and development are as important as the research. Might that be different for other research areas?

Looking Forward

From the authors' perspectives, there are many opportunities for future development and growth of the ARTs initiative. It needs to be planned into the institutional workloading framework and programme review. The cost of staff time to engage in additional research activity cannot be underestimated – ARTs members need to be able to utilise whatever research and scholarly activity or professional development time available to them. In a similar vein to the 'publish or perish' adage, time that is not used will be subsumed elsewhere.

Promoting a vision of research engagement that 'it is a process rather than an event' is essential to ensuring that the researcher training aspect of ARTs remains sufficiently flexible and responsive to the specific needs of practitioner-researchers. This needs to be team and project focused and recognise existing talent and expertise. A one-off initiative is not enough: it needs to be part of a formal research culture strategy and integrated into frameworks such as the Vitae Researcher Development Framework (RDF) (**CRAC, 2025**), which is structured into domains covering the knowledge, behaviours and attributes of researchers.

The potential adaptations and improvements need to be considered, ideally with a formal evaluation not only of the ARTs projects, but of the initiative itself if the effectiveness of ARTs to increase capacity and collaboration is to be part of recommendations for other faculties and institutions.

The ARTs development journey so far has been based partly on a shared vision of the importance of authentic practice-led research, and partly in response to wider debates around developing research culture, especially those that present a conceptualisation of research culture that lacks diversity. Supporting practitioner-researchers through facilitated, practice-led initiatives has the potential to enhance both individual development and a more inclusive institutional research culture, particularly in teaching-intensive settings. Drawing together these threads, we can now reflect on the broader significance of this work.

Concluding Thoughts

In conclusion, the ARTs approach presented here makes a significant contribution to not just the way that we understand our own faculty research culture, but also to articulating the challenge of understanding and developing research culture in teaching-intensive and practice-led contexts. By acknowledging and addressing the unique challenges faced by professions-facing academics transitioning to scholarly identities, the ARTs model demonstrates how institutional research culture can be transformed from the grass roots. Our work advances the field by providing a practical framework that bridges the persistent gap between practice expertise and academic research requirements, democratising access to research engagement through collaborative, scaffolded participation. As we have shown, this approach validates practitioner knowledge as a foundation for scholarly inquiry while addressing the structural barriers of time constraints, research anxiety, and imposter syndrome that disproportionately affect teaching-intensive faculties such as ours. The implications of our more inclusive and relational conceptualisation of research culture have the potential to extend beyond initial teacher education, offering insights for others seeking to develop

authentic, practice-led research communities. The ARTs model ultimately demonstrates that by valuing both practical and scholarly expertise, it is possible to foster a more equitable, sustainable and dynamic research culture, which values collective knowledge creation as well as individual academic identities. Most importantly, it honours research focused on the issues that are most relevant to our professions-facing community.

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List of Images

Figure 1: Live illustration captured from in-person Research Roundtable © University of Sunderland.

Figure 2: Poster sharing Agile Research Teams development in 2024 (Duffy, Hidson & Deacon, 2024).

Figure 3: 20 Questions Prompts.

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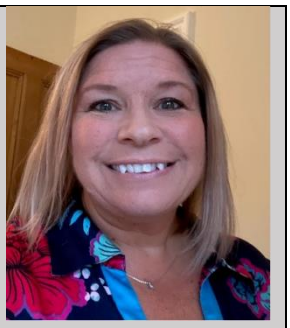

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Appendix

The ’20 Questions’ prompts provided on printed sheets around the room at the Research Culture Roundtable (RCR) in-person event.

Figure 3: 20 Questions Prompts.

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Coproducing an Academic Career Development Programme to Train Future Leaders in Environment: Health research with a focus on research culture and equality, diversity and inclusion

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Abstract

With the emergence of new capabilities such as artificial intelligence, alongside remote working and the cost-of-living crisis, the needs of early career researcher (ECR) training are fast evolving. PhD students and ECRs increasingly face mental health challenges, driven by isolation and career uncertainty. This paper offers a critical reflection on the creation of a joint academic career development programme (JACDP) between multiple partners, which offers additional, tailored opportunities to support young researchers in universities and governmental public health institutions.

Our experience suggests that the success of a multi-institutional programme requires a deliberate collaborative and co-productive approach at all levels. In addition to sharing the different expertise in each institution to build a varied training programme, involving young researchers in planning and delivering the training and social activities, tends to increase relevance and peer participation, and to help them develop leadership and time management skills. It is important to continually review the activities, engagement and future events provided,

to embed clearer evaluation within the programme, and to reflect on the accessibility of the training provided.

Our programme contributes to a positive research culture by providing relevant tailored and diverse academic and research training to develop future public health leaders while aiming to maximize inclusivity and recognising the value that PhD students and ECRs can bring to multi-partner research collaborations.

Keywords: training; partnership; multidisciplinary; involvement; impact

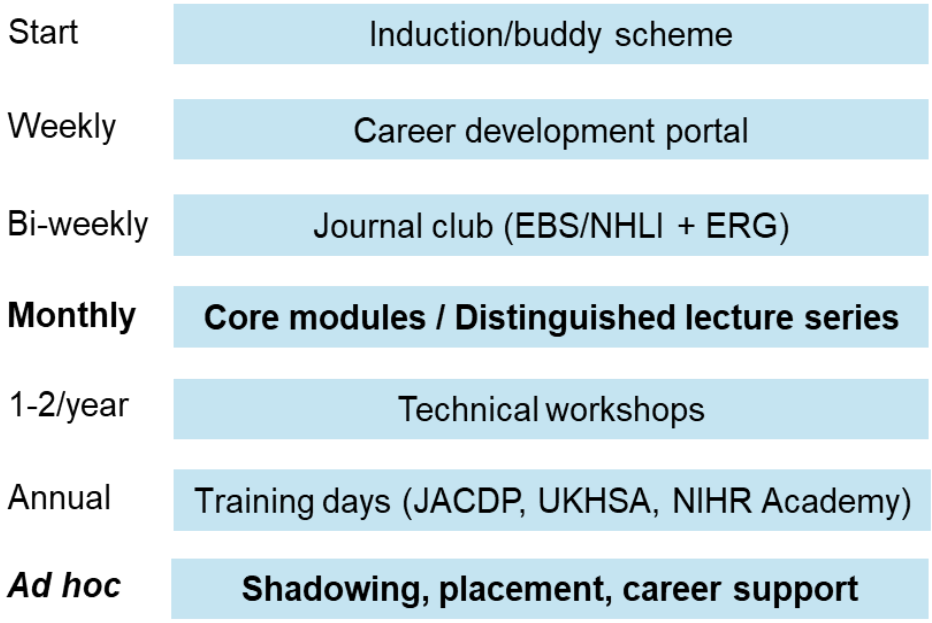
Introduction

This paper offers a critical reflection on the creation of a joint academic career development programme (JACDP) between multiple partners, including university institutions and the UK Health Security Agency (UKHSA), a UK government organisation. This programme was driven by infrastructure funding from the Medical Research Council (MRC) for the MRC Centre for Environment & Health (MRC-CEH) at Imperial College London (ICL) and the MRC Toxicology Unit at the University of Cambridge, and from the National Institute for Health and Care Research (NIHR) Health Protection Research Units (HPRUs) in Environmental Exposures & Health (**EEH, 2020**) and in Chemical & Radiation Threats & Hazards (**CRTH, 2020**) at ICL. HPRUs support UKHSA in its objective to protect the health of the public by delivering high-quality collaborative research. An essential aim of these infrastructures is to train the next generation of leaders in the fields of public health, data analytics, epidemiology and toxicology, which requires a wide set of technical and transferable skills. Developing a positive research culture committed to equality, diversity and inclusion (EDI) are priorities for all parties involved. Our cohort includes more than 150 PhD students and early career researchers (ECRs) based in multiple locations, for example ICL and Kings' College London in London, UKHSA in Chilton, and the MRC Toxicology Unit in Cambridge.

The primary aim of this programme is to provide specific training to PhD students and ECRs, complementing existing courses and opportunities provided by their host institutions, with the goal of nurturing future leaders in environment-health research. To achieve this, we deliver a broad range of multidisciplinary activities, including regular seminars and journal clubs; technical workshops (e.g., on systematic reviews, statistics, or machine learning); peer-to-peer support initiatives; and opportunities for participants to present their work through posters or oral presentations at local, national, and international events and conferences.

Figure 1 shows the key components of the programme across the NIHR HPRUs and the MRC-CEH, and the frequency at which these components occur.

Figure 1: Key Components of the Joint Academic Career Development (JACD) Programme, and the frequency of occurrence.



We have set up a Training Committee with representatives of all institutions involved to plan, organise and deliver these activities. We believe that it is essential to involve students and ECRs in the decisions taken. As a result, many activities are led or co-led by junior researchers. They are therefore represented on the Training Committee and coordinate the Researchers' Society, which aims to promote the welfare and strengthen cohort building across the MRC-CEH and our NIHR HPRUs.

Delivering training opportunities in a multi-institutional context in multi-geographical locations has always been a challenge. The emergence of online meetings after the COVID-19 pandemic offered new networking opportunities, enabling easier and more equal access to all members of our cohort. Nevertheless, online events tend to lack spontaneity and natural networking interactions which forms part of academic career development. At the same time, the substantial rise in the cost of living has pushed many students to take on work alongside their studies, while a well-documented increase in mental health issues (partly linked to the isolation of remote working) has also emerged (**National Union of Students, 2023; Hazell et al., 2021**). We have seen a renewed demand from students and ECRs for more in-person interactions, as demonstrated in our observations below. These opposite trends present significant challenges in terms of EDI when planning training activities.

Below, we share our experience and reflections on the challenge to apply our underpinning principle to foster a positive research culture among PhD students and ECRs through a JACDP while meeting the needs of a diverse cohort.

Our Observations

Although completing a PhD or progressing through a postgraduate career have always involved challenges, the emergence of new technologies such as artificial intelligence, alongside frequent remote working and the cost-of-living crisis, means that the experiences of students and ECRs and their expectations are fast-evolving. The planning and delivery of inclusive ACD activities needs to account for these changes.

As in other sectors, PhD students and ECRs are increasingly expecting value-for-money for their time, and they can be very selective about what activities outside of their core research they deem relevant to their training and career progression. Many of the best ideas in research come from exposure to a wide range of ideas, projects and topics, and focusing too much on a single research project can stifle the long-term creativity of researchers. For example, in the Researcher Development Framework (RDF) from Vitae, policy makers suggest that ECRs should be exposed to a variety of opportunities to broaden their skills and experiences (**Vitae, 2011**). A few students and ECRs tend to be really engaged in the decisions to plan and deliver training activities, which offer great opportunities to develop valuable leadership skills.

The mental health crisis, which seems to affect an increasing number of students and ECRs (**Cilli et al., 2023, Naumann et al., 2022, Evans et al., 2018**) requires host institutions to have adequate support services for their staff and students. This often leads to delay in research projects which can lead to request for extensions and running out of funding.

A growing number of students, particularly in London, are experiencing increased pressure and constraints on time due to the cost-of-living crisis (**ONS, 2023**). Expensive (and potentially poor quality) housing with long commute times can add extra stress. Furthermore, students are increasingly working second jobs to make ends meet. This can have an additive effect; if a student recognises a decline in their mental health, they may delay necessary changes to lifestyle which could worsen their mental health crisis longer term.

It is essential to maximise the career development of junior academic researchers, so that they can develop in a positive and stimulating research culture. While harassment, bullying and discrimination have clearly no place in any institution, a supportive and positive environment is also required to encourage career development. This can be achieved by

promoting a collaborative culture of integrity, good governance and best practice.

There are institutional initiatives to provide support for students and staff with specific learning difficulties or disabilities, including dyslexia and attention deficit hyperactivity disorder (ADHD), and there is more awareness about other invisible disabilities, such as colour blindness. Although each student or ECR will likely have specific needs or requirements, there is still a lot of progress required to make all the teaching and training activities more inclusive, including in tailored programmes such as the JACDP.

EDI is complex and multifaceted (**Dewidar et al., 2022, Swartz et al., 2019, AlShebli et al., 2018, Powell, 2018**), and needs to be championed throughout all processes from recruitment to supervision or line management of students and ECRs. Evidence suggests that staff are more productive in diverse environments in terms of gender, ethnicity, socio-economic status, sexuality and religion (**International Labour Organization, 2022**). Identifying measures to monitor changes in relation to these characteristics as part of a training programme can be challenging. Nevertheless, host institutions tend to have research culture and EDI policies and all the institutions involved in our JACDP are fully committed to these values.

Our Experience and Findings

To meet the evolving expectations of students and ECRs, we believe that it is essential to involve them in the planning and delivery of training and social activities. Such involvement helps to maximise the relevance of the activities organized to their needs, to increase participation from their peers, and to leadership and time management skills. Our student and ECR representatives are integral to our JACDP Committee, alongside the HPRU Directors from Imperial and UKHSA. This mirrors the growing involvement of members of the public and patients in the co-production of research projects to build on their lived experiences. Regular direct interactions provide opportunities to receive formal and informal input and feedback from students and ECRs, and to reflect and improve on training activities delivered and on the overall strategy of the programme.

Peer-to-peer interactions are an important component of such a programme. We offer each new PhD student to be paired with a more senior member of our cohort, through our ‘buddy’ scheme. The buddy is usually another PhD student in their second or third year, ideally working in a similar area, who can provide support in navigating their PhD and the JACDP in the first few months. The buddy is there if the student needs pointing in the right direction, whether in relation to administrative

queries (e.g., assessment milestones) or getting started in their research project. We also encourage ECRs to organise and deliver some of our technical workshops as an opportunity to share their know-how with their peers. These workshops usually have two components: a theoretical one to explain concepts and methods, and a practical one to put the theory into practice under the guidance of the ECR. One of the ECRs who delivered a workshop on time-series analysis found that:

> *…organising a technical workshop was a fantastic opportunity to engage in teaching activities, encourage colleagues to apply the methods that I use across different disciplines and also invite external experts to present their research.* (**ECR Participant, 2025**)

Aside from organising social activities, the members of the Researchers' Society (RS) can also take charge of their own initiatives. With support from the JACDP, they developed a particular focus on sustainability, which led to the creation of working groups, an internal report for the MRC-CEH, a publication in *The Lancet Planetary Health* (**Roca-Barcelo et al., 2021**), and to community-based film screenings to raise awareness about this important topic. Because the students and ECRs lead the RS, they can plan a programme according to their needs and desires. We feel that it has been a privilege to be invited to most of their events. In addition, to see the students grow in their confidence and character because of their involvement in both the RS and the JACDP, gives us a huge sense of pride.

We have supported our ECR cohort to engage with local communities in public community involvement engagement and participation (PCIEP), including multi-ethnic and diverse socio-economic backgrounds, to better understand the challenging realities faced by communities through research projects, large events and placements. Placements, for example in local authorities or at UKHSA, have provided valuable opportunities to some of our students to work on rapid research translation and public health policies, but adequate funding support is necessary.

The highlight of our programme is an in-person annual training day, where students present their research findings through either posters (Year 1) or oral presentations (Years 2 &3). We usually have more than one hundred participants and take this opportunity to have dedicated sessions on specific topics including EDI, mental health and sustainability. These sessions are organised as conversations or debates to make them more interactive and serve as prompt for further discussions. In our post-event survey, the quality of our 2024 annual training day was described as excellent by 79% of respondents, with the quality of the presentations being particularly praised.

Students and ECRs often can feel overwhelmed by the wide range of activities on offer. For example, the NIHR Academy organises a wide range of events for their members, including a residential Doctoral Training Camp; the MRC has a supplement scheme which support eligible students to get extra funding for placements, high-cost training or overseas fieldwork; the MRC Toxicology Unit organises the Integrative Toxicology Training Partnership Summer School to build capacity in toxicology and related disciplines. These are only some of the many opportunities offered to our cohort that supplement the day-to-day activities provided by their research group, department and institutions. To help them, we have put together a handbook with all the essential information and guidance that students and ECRs need. Signposting them to the right person to answer their queries is often a key first step to progress. Newsletters can be useful to share opportunities related to training, career development, networking or funding, but these need to be easy to easy-to-read and ideally targeted to specific sub-groups.

To promote EDI, we work with local entities, such as the Equality, Diversity and Inclusion Centre (EDIC) at ICL to ensure that we are aligned with institutional policies. We organise a mixed set of events with online only events (e.g., International Distinguished Lecture Series where we invite world-leaders in the field to give us a virtual lecture followed by a Q&A), hybrid events (e.g., seminars and journal clubs) and in-person only events (e.g., annual training day). Online events enable involvement of more participants across the different partner geographical locations but can lack spontaneity. By offering a variety of formats and providing a diverse range of activities, we aim to ensure that activities are inclusive and accessible to all, while also enabling in-person opportunities for networking and socialising, fostering a more diverse and connected community.

By coproducing many of our training activities with students and ECRs and offering them many opportunities to share their views and clarify their needs, we believe that this contributes both to a positive research culture and to a more inclusive, diverse and equal research environment.

Recommendations

The Concordat to Support the Career Development of Researchers (**Vitae, 2019**) provides a valuable starting point to identify best working practices and responsibilities to create a positive research culture.

In a multi-institutional context, it is often challenging to deliver training activities which offer networking and social opportunities, while maximising accessibly and inclusivity. In addition to the working from home culture established during the pandemic, students and ECRs are

spread across many campuses and institutions adding to the possible feeling of isolation. As a result, we recommend mixing in-person and online events which fosters inclusivity. In both in-person and remote events, best practices in terms of accessibility of the content of training and social activities, should be systematically considered (**Doran et al., 2024**). Guidance on this has been written by the British Academy of Management (**Sliwa et al., 2021**).

Our informal observations have been that PhD students and ECRs tend to be extremely dynamic and motivated key players, particularly for PCIEP activities, where accessibility and EDI should also be reflected. Looking after the wellbeing of our cohort is integral to the training programme. Providing pastoral care for students and ECRs and ensuring that they are aware of support routes before they need them is important. It can be challenging to promote open conversations about mental health or financial difficulties, but a positive research culture largely facilitates these kinds of interactions. Our experience is that initiating these conversations encourages researchers to seek help and guidance.

Students and ECRs who have engaged in the programme have suggested, through informal conversations and interactions, that it is motivating to see some of their work rapidly translated into policies or implemented in practice. This can be achieved through contributing to the work of a national or international commission (e.g., the International Commission on Radiological Protection) or through placements in UKHSA or local authorities. The NIHR, for example, offers short placement awards for research collaboration (SPARC) and local authority short placement awards for research collaboration (LA SPARC) open to NIHR Academy members. Shadowing senior colleagues or attending meetings of expert committees (e.g., the Committee on the Medical Effects of Air Pollutants (COMEAP) or Committee on Medical Aspects of Radiation in the Environment (COMARE) can give students and ECRs real-world insights into challenges faced by advisors and policy makers. As for most training activities, our experiences have shown that clear signposting is essential for junior researchers to be aware of these opportunities.

Beyond the engagement of student and ECR representatives, it is important to undertake surveys and/or opinion polls to find out the wider opinions of the cohort and to identify potential issues. Again, this should be done through a mixture of in-person sessions, which tend to more open, and online questionnaires, which are more inclusive and anonymous. Although we frequently use anonymous feedback forms after our training events (e.g., Qualtrics forms and Mentimeter polls), we are yet to set up recurring annual surveys, with consistent questions, which

would enable a rigorous evaluation of the programme, research culture and EDI over time.

Managing to be part of an external accreditation scheme, such as the CPD Certification Service (**CPDUK**) can make it more rewarding for students and ECRs to attend academic career development opportunities. Similarly, researchers and staff delivering post-graduate training activities should be encouraged to consolidate their personal development and evidence of their professional practice in higher education (e.g., Fellowship of Advance Higher Education) (**AdvanceHE, 2025**) .

Finally, it is important to avoid duplication as much as possible with other initiatives. Although some training activities will always remain specific, there tends to be a lot of overlap between the skills offered by similar programmes. Most of the NIHR HPRUs require basic training in systematic reviews, statistics and translation to impact policies with a public health focus. Collaborations with other initiatives in one's institution and beyond should therefore be strongly encouraged.

Conclusion

The success of a multi-institutional programme is primarily due to a deliberate collaborative and co-productive approach. It also benefits greatly from the different pools of expertise in each institution to build a varied programme of training for PhD students and ECRs. We are continually reviewing our activities, engagement and future events based on feedback received, reflexive discussions and innovative ideas, evolving best practices, and successful experiences of others, and are now seeking to embed more systematic evaluation within the programme. We are also keen to interact with others and share best practice across various research and research culture communities and to further improve. Our programme contributes to a positive research culture by providing relevant tailored and diverse academic and research training to develop future public health leaders while aiming to maximise inclusivity and by recognising the value that PhD students and ECRs can bring to multi-partner research collaborations.

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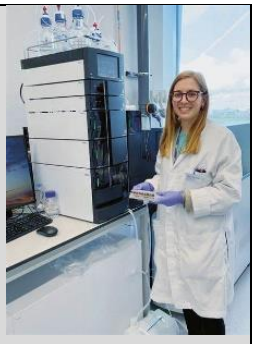
Dr Helena Rapp-Wright is an MRC Centre Early Career Research Fellow at Imperial College London's School of Public Health (2025), researching human exposure to contaminants of emerging concern through recreational activities in water environments. She joined Imperial as a Research Associate in the Environmental Research Group (2021), focusing on wastewater-based epidemiology. Her work extends to freshwater analysis, biomonitoring, sustainability and community engagement. Her expertise began during her PhD at Dublin City University (2021) and prior work at LGC. She also holds an MRes in Forensic Science (King's College London, 2016) and a BSc in Chemistry (University of La Laguna, 2014).	
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The Precision Mentorship Programme for Inclusive Researcher Development: A critical reflection

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Abstract

Effective mentorship is widely acknowledged as essential for fostering professional growth and enhancing research capabilities in UK higher education (HE). However, the process of finding a mentor often remains informal, relying heavily on personal connections, characteristics and pre-existing relationships. This critical review examines the Precision Mentorship Programme (PMP) a novel initiative developed and piloted at Kingston University with researchers in the arts and humanities. Designed to build confidence, enhance research skills, and support the creation of robust research plans and funding proposals, the PMP combined four one-hour personalised mentorship sessions with wrap-around support and resources, to guide 12 participants through the complexities of academic research and funding acquisition. In this article we describe the PMP's design, delivery and evaluation. We draw on our experiences of developing and implementing the PMP to reflect on its successes, limitations, and broader implications for inclusive researcher development in UK HE. While the PMP successfully achieved several of its objectives, it also encountered challenges in fully addressing the diverse needs of its participants and overcoming systemic barriers to inclusive professional development and career progression. The broader implications for UK HE professional development include 1) Equipping experienced researchers with precision mentorship skills, resources and incentives to mentor, 2) Developing and testing PMP models within research groups, projects and programmes, 3) Recognising mentor's contributions in institutional and sector quality performance frameworks. In conclusion, the PMP is a useful approach for inclusive researcher development, however for its full potential and benefits to be sustained mentors need to be recognised and rewarded by institutions and research quality assessment frameworks.

Keywords: precision mentorship; researcher development; coaching; inclusive research culture

Introduction

In the United Kingdom and internationally, effective mentorship is widely acknowledged as essential for fostering professional growth and career progression of academics and researchers at all levels, from early career researchers (ECRs) to professors. According to the literature mentorship should ideally serve multiple functions, including career development, psychosocial support, and role modelling (**Ragins & Kram, 2007**). Mentorship provides not only guidance and encouragement, but also facilitates the development of professional networks, which are essential for career advancement (**Allen & Eby, 2007**).

Fostering a supportive and inclusive research culture is central to the *Concordat to Support the Career Development of Researchers* (**Vitae, 2019**). It will be increasingly important for research institutions to demonstrate inclusion under the People, Culture and Environment in the 2029 Research Excellence Framework (REF). However, at present opportunities for researchers in the UK are often not inclusive, with significant barriers persisting, limiting diversity and stifling innovation within research communities (**Ross, 2024**).

In UK academic contexts, the process of finding a mentor remains informal and unstructured, favouring those with established networks and those with similar characteristics or backgrounds to their mentors, or previous supervisory relationships. This reliance on informal, connection-based mentorship exacerbates systemic inequities, excluding many talented individuals. Underrepresented groups frequently face barriers to accessing high-quality mentorship and opportunities; and often share characteristics protected under the UK Equality Act (such as disability, gender, sexual orientation, and race), have caring responsibilities, or are on part-time or temporary contracts (**Griffin, 2019: 93-110**).

Precision mentorship has emerged to address the limitations of traditional mentorship models like GROW (**Whitmore, 2010: 83-84**) and OSCAR (**Gilbert & Whittleworth, 2009**). While effective for many, these models often fail to meet the nuanced needs of underrepresented mentees in specialised areas of work. Drawing on inclusive leadership principles, intersectionality theory, and tailored coaching practices, precision mentorship recognises and tackles systemic and individual barriers. It is especially relevant in disciplines requiring specialised skills or affected by systemic inequities, such as academic medicine (**Cohen, 2024; Ransdell et al., 2021**) and the creative industries (**Cateridge et al., 2024: 174-193**). By

prioritising context-specific strategies and skills development, precision mentorship bridges the gap between general frameworks and the tangible, real-world support mentees need to thrive.

In this critical reflection we explain the Precision Mentorship Programme (PMP) a novel initiative developed and piloted at Kingston University with researchers in the arts and humanities. The context for the work was institutional change to develop a Design, Arts and Creative Practice Knowledge Exchange and Research Institute (DACP KERI). Here we draw on our experiences of developing and implementing the PMP to reflect on the challenges, achievements, and broader implications for inclusive researcher development in UK HE.

The Precision Mentorship Programme

Table 1 illustrates the key phases of this pilot programme from design to conclusion and reporting, described below.

Phase 1: Design

The PMP was conceived as a supportive intervention aimed at empowering individuals at various stages of their research careers; from those just starting out to ECRs and mid-career researchers, as well as highly experienced professors and academics. To design the PMP we drew on mentorship principles, which emphasise creating an environment where mentees can explore their research ideas, receive constructive feedback, and build confidence in their abilities (**Ragins & Kram, 2007**).

Our aim was to offer tailored mentorship experiences that reflect the unique needs and aspirations of each participant (**Allen & Eby, 2007**). We were influenced by fields such as personalised education (which adapts strategies to individual circumstances) and organisational psychology (which focuses on contextual growth). Thus, the PMP was designed to be flexible, inclusive, and aligned with the mentee's unique context.

Alongside this design work, Jensen undertook the administrative process of attaining a budget, tendering, sub-contracting, and agreeing a schedule of services with Morrow.

Phase 2: Recruitment

The recruitment process involved a targeted faculty-wide campaign, led by Jensen, to attract participants, utilising email announcements, departmental meetings, and follow-up conversations. Clear information was provided to outline the application process, ensuring potential participants understood the PMP's objectives and potential benefits.

The 3-week application period allowed interested individuals to express their interest, after which a selection of a cohort of 12 was made based on predefined criteria to ensure a diverse and committed cohort. The key criteria were a) willingness to engage in the programme b) having a research idea, plan or proposal to work on, and c) inclusion of researchers from across design, arts and humanities.

Jensen reflects: The PMP was established with a clear focus on supporting and empowering researchers in their development, rather than serving as a monitoring tool. It aimed to meet participants at their current stage and assist them in progressing from that point, regardless of their starting position. Ensuring confidentiality and the inclusion of an independent mentor were critical elements to prevent any perception of performance management. Recruitment materials for the PMP emphasised that the mentorship was designed to provide expert guidance, helping participants reflect on research planning and long-term career goals.

Table 1. Key Phases of the Precision Mentorship Programme

Phase 1: Design (Months 1-2)
• Initial planning meetings to define objectives and goals. Agree numbers of participants and number of sessions/activities to be delivered. • Develop a flexible programme structure, including online sessions and wrap around support. • Create supporting materials, such as self-assessment questionnaires and resource documents.
Phase 2: Recruitment (Month 3)
• Develop recruitment materials and selection criteria. • Launch recruitment campaign via email and departmental announcements. Promote the programme at departmental research meetings. • Open application 3-week period for interested participants. • Select participants based on criteria and objectives.
Phase 3: Delivery (Months 4-10)
• Initial meeting and orientation session to introduce the programme and understand expectations of each mentee. • Conduct one-to-one mentorship sessions, focusing on individual research goals. Four sessions were available to each mentee over 6 months. • Provide wrap-around support and additional resources and support as needed outside of sessions e.g., comments on research proposals or papers.

Phase 4: Evaluation (Month 11)
• Close the programme and thank mentees for their engagement. • Send personalised certificates of attendance and individualised summary feedback to participants. • Distribute Participant Evaluation Forms for feedback. • Analyse participant engagement and feedback to assess programme effectiveness.
Phase 5: Conclusion and Reporting (Month 11)
• Compile a report summarising outcomes and recommendations. • Present findings to institutional stakeholders and wider audiences highlighting challenges and achievements. • Plan for future mentorship programmes and models based on the pilot's results.

Phase 3: Delivery

Programme delivery centred on one-to-one expert advice sessions led by Morrow, an independent research consultant with over 25 years' experience in academic research. Conducted remotely via Microsoft Teams, the sessions offered flexible scheduling to suit participants' varied needs.

Confidentiality and supportive engagement were essential for creating a safe, empowering environment for exploring research ambitions. Each mentee was asked to complete an 'About you, research strengths and needs' form to discuss at the first meeting. This information gave Morrow a basic understanding of the participant's level of experience, areas of strength and needs, and their goals for the programme.

Each hour-long session began with welcoming and introductions, encouraging open dialogue, enabling participants to discuss their research proposals' topics, challenges, and ideas. This personalised approach provided constructive feedback, promoted self-reflection on strengths and needs, and guided participants in identifying key areas for research development.

Morrow reflects: The mentorship programme recognised that a one-size-fits-all approach would not suffice, necessitating a flexible and individualised framework to support participants effectively. To address this, an email list outlining various types of available assistance—such as support with research profiles or written feedback on materials—was provided, enabling participants to select options that aligned with their specific needs.

The PMP also emphasised creating a safe space for participants to share openly about their challenges, including feelings of isolation, rejection, or inequities within the research system. Listening attentively and offering encouragement were central to supporting participants, even in instances

where they felt they had made little progress or faced significant obstacles in their research journeys. The mentorship aimed to provide not only practical guidance but also emotional support, affirming participants' aspirations while addressing their concerns.

During the early stages of the PMP, it became evident that several participants felt isolated and disconnected from both their colleagues' research activities and the university's strategic transition to an institute model. The one-to-one mentorship sessions played a crucial role in fostering connections and collegiality, encouraging participants to engage with colleagues beyond their immediate departments or schools, facilitating a deeper sense of belonging and connection.

Phase 4: Evaluation

We captured feedback from participants at the end of the PMP using a bespoke questionnaire administered via email. Nine of the 12 mentees responded. Their feedback indicated that the mentorship was instrumental in clarifying mentee's research objectives and enhancing their confidence in applying for funding. Many expressed gratitude for the constructive feedback they received, which they said had helped them to refine their proposals and articulate their research narratives more effectively.

Participant's review of their self-assessed strengths and needs at completion of the PMP revealed that on average the greatest areas of improvement were: 'Feel you have good opportunities to work on research' (average 2.1 point increase on a scale of 1-10), 'Feel confident to prepare funding proposals for research' (increase of 2.03 points), 'Have role models in the organisation' (increase of 2 points). There is no space here to go into the full range of improvements and benefits that were reported.

One of the PMP's most significant achievements was the creation of a nurturing environment where participants felt safe to discuss their research ideas and challenges openly. As one Senior Lecturer noted:

> *Elizabeth has been one of the best mentors I have ever had. Her approach to listening, to helping where she could, offering honest and well-informed opinions made it really useful.* (**Senior Lecturer feedback**)

A benefit of the PMP was that it developed and provided practical resources, including guides and templates that served as valuable tools for participants navigating the often-daunting research landscape. Some of these resources are tailored to signposting support and information in the

university context, whilst others provide the structure for self-reflection, goal setting and monitoring progress. As one participant explained:

> *I came away inspired and with a better understanding of how to strengthen my application. Elizabeth also sent me a copy of a colleague's application [with permission] to understand the application requirements better and use as a model.* (**Participant feedback**)

The motivational aspects of the PMP were crucial for early-career researchers, as one participant said:

> *The mentorship has made me excited and motivated about undertaking more research.* (**Participant feedback**)

Additionally, a Senior Lecturer remarked:

> *I think it would have been several years before I had made the progress that I have with writing up my work and developing my research profile.* (**Senior Lecturer feedback**)

The above testimonials highlight the profound impact of the mentorship programme on some of the 12 participants' professional development and research endeavours. However, while the feedback was overwhelmingly positive, it is important to acknowledge that the PMP might not have worked for everyone, and we consider why below.

Phase 5: Conclusion and reporting

The PMP's conclusion in July 2024 evoked mixed emotions. In their feedback four participants said they were 'sad' the programme had come to an end and six said they would 'definitely' take up an opportunity like this in the future. While many participants expressed gratitude for the support, two mentees, who had engaged less than anticipated, conveyed their thanks with some regret and disappointment via email comments. This stemmed from competing priorities or a feeling that they ought to focus on conducting their research directly.

Morrow reflects: Mentorship is an intensive and often invisible process that relies on empathy, authentic enthusiasm, and a personal approach to ensure individuals feel genuinely understood. However, the dynamic is unique, as mentees are neither colleagues, clients, friends, nor confidants. As the programme concluded, a sense of disconnection emerged, marking the end of the formal relationship. While some connections continue through social media, the mentorship contract formally concluded the interaction with the 12 participants, whose journeys had become familiar over time. The relational effort and mutual exchange involved in the

process made the closure feel akin to a loss, underscoring the depth of engagement inherent in effective mentorship.

We produced a report for internal institutional learning that included information about the time investment (**Table 2**) and anonymised feedback from participants. We concluded that flexibility and the online format were key strengths, accommodating participants with diverse responsibilities, such as teaching and administrative duties as well as caring responsibilities and lives outside of work. This adaptability allowed individuals to engage in ways that aligned with their unique circumstances, enhancing accessibility and inclusion.

Table 2. Delivery Time and Take-up by Participants

Type of Mentorship Delivered (P=Participant)	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**	**P7**	**P8**	**P9**	**P10**	**P11**	**P12**	*total*
One-to-one online discission sessions	2	5	2	2	4	4	3	2	4	1	2	4	35
Written comments on a new proposal in development	1	5	-	-	-	-	-	-	-	-	-	4	10
Written comments on a personal research profile or career development application	-	-	-	2	1	-	2	-	4	-	-	-	9
Written comments on a revised proposal	-	-	-	-	-	-	-	4	2	-	-	-	6
Support with literature searching or planning a literature review	2	1	-	-	2	-	-	-	-	-	-	-	5
Written comments on an academic paper in development	-	-	-	-	4	-	-	-	-	-	-	-	4
Hours of direct individual support	5	11	2	4	11	4	5	6	10	1	2	8	**69**
Programme administration time (e.g., setting up sessions, recording sessions) 2.5 hrs per week/28 weeks													70
Hours spent developing mentorship resources													16
Programme reporting, review and analysis													15
	Total Programme Delivery Time (Hours)												170

Challenges and Achievements

Responding to researchers' diverse needs

In delivering the programme we found that one of the most challenging issues was the difficulty in assessing and addressing the diverse needs of individual participants effectively, particularly if they didn't know themselves what might help them. While many benefited from the tailored support, some individuals may have felt that their specific needs were not fully met. This disparity highlighted the inherent challenge of providing mentorship experiences that are responsive to the varied expectations and development needs of a diverse cohort.

Morrow reflects: As the designer and mentor of the PMP, there was a strong sense of responsibility to support participants and cultivate meaningful mentor-mentee relationships. However, when two participants began to disengage from the online sessions, it prompted feelings of inadequacy, highlighting challenges in connecting with them in ways that might have been more beneficial. This experience underscored the importance of not internalising such challenges and recognising that each participant has unique needs, responsibilities, and obligations that extend beyond their research. The reflection emphasised the necessity of maintaining flexibility and understanding within mentorship practices.

Programme format and schedule

Although we invited feedback from all 12 participants, 9 replied and it was not possible to know what non-responding participants felt about the programme or their level of engagement. These experiences highlight the need for ongoing evaluation and adaptation of mentorship responses to cater to a broader range of changing levels and types of need. For example, during the programme it emerged that some participants preferred shorter 30-minute sessions rather than an hour and this additional flexibility could be promoted in future. In the feedback, one person said they would have preferred to meet in person, another person said they would have preferred to have more sessions over a year instead of 6 months. Some participants felt that the structure and time constraints of the programme could hinder deeper engagement, particularly for grant writing support, with one mentee stating,

> *I thought that it was very inclusive and suited my needs well. […] The approach worked well but I found it hard to manage time. I needed to start writing the outline earlier in the process to get feedback.* (**Senior Lecturer feedback**)

Systemic barriers to researcher development

A significant challenge that emerged from the programme was the issue of time constraints and the time involved in working on research grants. Many participants struggled to balance their desire to develop research ideas and proposals alongside other work commitments, as well as the demands of engaging with the programme. Additional barriers, such as part-time work and heavy teaching loads, further impeded participants' ability to focus on developing and writing research proposals. Many expressed disillusionment with the competitive funding landscape, the pressure to 'win' grants, and the insider knowledge needed to 'play the game.'

We learnt that while the offer of support is invaluable, it must be accompanied by clear communication about the expectations and realities of the research landscape and who is eligible to apply for grant funding with input from the faculty's Research Development Manager. To support participants, we encouraged collaboration, urging them to connect with peers working on similar themes and to engage with interdisciplinary bidding groups or research incubators going on in the university. These insights into the realities of gaining funding underscore the need for continuous, team-based guidance during grant writing and fostering realistic expectations about the challenges of securing academic funding.

An unexpected benefit was that the reflection and communication between us about general issues arising from the programme offered a conduit for organisational learning. The process of upwards feedback about key issues for researchers helped to foster continuous improvement and knowledge sharing to inform the developing institute.

Implications for Professional Development

The broader implications for professional development within UK HE research include several key components.

- *Mentorship Skills and Capacity:* Equipping more experienced researchers with PMP knowledge and skills, resources and incentives (such as secondments, pay and promotion criteria), is essential for increasing capacity for precision mentorship in different disciplines and contexts of research. Providing prospective mentors with guidelines on inclusive programme design, recruitment, delivery, and evaluation could support equity for underrepresented groups.

- *Models of Mentorship:* Developing the PMP approach into different models within research groups, communities of practice, networks and programmes could extend the benefit of inclusive mentorship in real-world settings. This ensures that mentorship strategies are adaptable to different researchers, disciplines, and contexts, fostering more sustainable scalable models of mentorship.

- *Recognition and Reward:* Acknowledging mentors' contributions within institutional and sector quality frameworks is essential. Valuing mentorship as part of research success, alongside research outputs, motivates experienced researchers to mentor and promotes a culture of inclusion. PMPs should be included in REF 2029 as evidence of investment in People Culture and Environment.

Conclusions

The PMP contributes significantly to enhancing the research environment of DACP KERI, and equity in researcher development. Sustainability of programmes like this depends on balancing innovation with realistic resource allocation and ensuring they are part of a broader ecosystem of support. Success requires collaboration, adaptability, and a commitment to organisational learning from both the challenges and achievements in the process. Precision mentorship should be utilised by research institutions and be included in quality assessment frameworks. While the PMP proved successful at Kingston University, its implementation may pose challenges for smaller specialist higher education institutions with a teaching focus, as they may lack the necessary resources to sustain it. To address this, the proposal to include precision mentorship as evidence for REF 2029's People, Culture and Environment element could be expanded to consider additional strategies that may incentivise buy-in from senior management at non-research-intensive institutions.

Key Insights:

- The PMP created an inclusive mentorship experience and supportive environment where all researchers, regardless of their background, discipline or level of experience, felt valued and had equal opportunities to succeed.
- The PMP helps mentees build confidence in their abilities and develop a collaborative outlook, which are crucial for navigating complex research processes, accessing funding opportunities, and identifying useful networks and resources.
- Research institutions can utilise the learning from designing and delivering the PMP to identify and address barriers, implement effective practices, and develop support structures that meet researchers' diverse needs.

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List of Tables

Table 1. Key Phases of the Precision Mentorship Programme

Table 2. Delivery Time and Take-up by Participants

Dr Elizabeth Morrow is an independent research consultant, evaluator and advisor specialising in research strategy and inclusive research design. With over 25 years of experience in academic research, teaching and consultancy, she is based in Northern Ireland and collaborates with research leaders across the UK and Ireland to support them to achieve their research goals. She designed the *Research Leaders Impact Toolkit* for Advance HE and wrote the *Handbook of Service User Involvement in Nursing and Healthcare Research*. Her key interests centre on power and engagement in knowledge production.

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Mapping Institutional Commitments to External Concordats to Support Meaningful Research Culture Change

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Abstract

Over recent decades, most UK academic institutions have signed numerous concordats, charters and declarations to demonstrate their commitment to responsible practices in support of research. While these agreements provide essential accountability and direction, they also introduce administrative demands and, without coherent oversight, could lead to redundant actions that inadvertently divert resources from more meaningful research culture change.

Here we discuss a project launched at Loughborough University to map the range of actions, goals and responsibilities arising from the University's participation across multiple concordats. This project sought to streamline responses to these commitments and explore their alignment with our institution's unique research culture ambitions.

This paper presents our approach and shares key lessons we learned throughout the process to potentially help other institutions looking to simplify and coordinate their research culture commitments. Our hope is that by identifying synergies and efficiencies, the sector will be well positioned to better leverage its resources to continue to pursue even more impactful actions to enhance research cultures.

Keywords: concordats; charters; research culture; governance; administration; strategic alignment

Introduction

Concordats, charters and declarations feature prominently in the landscape of influences shaping research cultures at universities across the UK and beyond. Developed over time in response to emerging challenges and opportunities, these agreements seek to address varied issues, for example, those related to researcher development, responsible research assessment and research integrity. They also help institutions demonstrate their commitment to best practices while promoting accountability and alignment with sector-wide standards, with many universities signing up to multiple such initiatives.

However, as more concordats and agreements have emerged, institutions face concerns around managing a growing number of commitments. Without coherent oversight, responses can become fragmented, leading to the risk of duplicated efforts, excessive administrative burdens and inefficiencies that divert resources from more meaningful culture change. Institutions may also struggle to balance compliance with these frameworks against their own strategic priorities, risking a reactive rather than a proactive approach to developing their own priorities for their research cultures.

In 2024, we carried out a project at Loughborough University to map our commitments across various concordats, charters and declarations. Our goal was to identify ways to streamline our efforts in advancing the University's ambitions for its research and innovation culture and strengthen connections between different areas of work. This article outlines our approach and key findings. By sharing our experience, we hope to offer insights that support other universities in managing similar challenges and ensuring they can use these frameworks to also meaningfully benefit their own ambitions for their research cultures.

Background and Context

UK universities engage with various concordats, charters, declarations and agreements – henceforth, concordats – to uphold responsible practices and improve the cultures in which research takes place. Key examples include the Researcher Development Concordat, which sets expectations for supporting research staff; the Declaration on Research Assessment (DORA) and the agreement of the Coalition for Advancing Research Assessment (CoARA), which promote fairer approaches to evaluating research; the Research Integrity Concordat, which ensures ethical research practices; and the Technician Commitment, which recognises the vital role of technical staff. Some concordats go beyond research culture to also encompass wider academic culture, like the Athena Swan Charter

and the Race Equality Charter, which focus on promoting equity, diversity and inclusion in higher education and research institutions.

These concordats have played a crucial role in raising awareness of key issues in research culture, providing frameworks for accountability, and guiding institutions towards change. They offer clear standards, promote sector-wide alignment and demonstrate accountability to funders and policymakers. However, as most universities are signatories to multiple examples of them, balancing their numerous commitments with limited resources has become a growing challenge.

Concerns about excessive research bureaucracy have gained increasing attention in recent years. The Review of Research Bureaucracy (**Department for Business, Energy & Industrial Strategy, 2022**) and the Concordats and Agreements Review (**Oxentia, 2023**) both highlighted the need to reduce administrative burdens while maintaining accountability. While bureaucracy is not inherently negative, we are nevertheless seeing a growing desire to ensure that research bureaucracy serves research culture, and not vice versa. Also, without coordination, institutions risk responding to each concordat in isolation rather than integrating commitments into a cohesive strategy. This can result in a disconnected and compliance-driven approach rather than one that could deliver more meaningful cultural change.

Our Approach

In our analysis we considered 18 research and innovation-associated concordats (**Table 1 & 4**), including 17 listed in the REF 2029 People, Culture and Environment Indicators Survey conducted by Technopolis (**Technopolis, 2024**), as well as the More Than Our Rank initiative (which seeks to challenge the limitations of global university rankings and support institutions in showcasing the diverse ways they contribute to society beyond what rankings can capture). Through desk research and consultations with colleagues in the summer of 2024, we established that Loughborough University was a signatory to nine concordats and a supporter of six more, encompassing 68 commitments between them.

*Table 1: Research and innovation-associated concordats, declarations and charters. (cf. **Table 4**)*

Athena Swan Charter (2005, revised in 2015 and 2021)	Barcelona Declaration on Open Research Information (2023)	Coalition on Advancing Research Assessment (CoARA) (2022)
Concordat for Engaging the Public with Research (2011)	Concordat for the Environmental Sustainability of Research and Innovation Practice (2024)	Concordat on Open Research Data (2016)
Concordat on Openness on Animal Research (2014)	Concordat to Support Research Integrity (2012, revised in 2019)	Concordat to Support the Career Development of Researchers (2008, revised in 2019)
Guidance for Safeguarding in International Development Research (2020)	HR Excellence in Research Award (2008, revised in 2019)	Knowledge Exchange Concordat (2020)
Leiden Manifesto on Research Metrics (2015)	More Than Our Rank Initiative (2023)	NCCPE Manifesto for Public Engagement (2008)
Race Equality Charter (2016)	San Francisco Declaration on Research Assessment (DORA) (2013)	Technician Commitment (2017)
UKRI Statement of Expectations for Doctoral Training (2024)		

To assess how these commitments were being addressed, we then reviewed eight action plans that were available at the time and each related to one or more of those concordats. These described approximately 360 actions that had either been completed during the timeframe of the current action plan or were in progress. These actions were systematically mapped against the relevant concordat commitments in a spreadsheet format, to give a comprehensive overview of our institutional activities. Information on the ownership of actions, their timelines and any key performance indicators was also recorded where they were available.

Each action was then mapped onto one or more of Loughborough's Research and Innovation (R&I) Culture Themes and Ambitions, which had been developed in a parallel strand of work following the SCOPE Framework for Research Evaluation (**Himanen et al., 2024**). Lastly, thematic analysis techniques, as outlined by Braun and Clarke (**2006**), were then used to categorise actions into distinct types. This multi-phase, iterative process involved familiarising ourselves with the data, initially identifying and labelling (or 'coding') interesting features of the actions, searching those labels (or 'codes') for themes, reviewing those themes, and refining them into clear categories or 'action types'. This approach enabled us to identify patterns across different commitments and to look

for potential areas of duplication, as well as synergies and gaps in our institutional efforts.

Lesson Learned

This project highlighted several key insights and challenges (which we have no reason to believe are unique to Loughborough University) and which we share now in the hope they will help others undertaking similar work.

Accessing and Interpreting action plans

We found that the availability of action plans for different concordats varied greatly. Some were readily accessible online, while others required us to engage directly with colleagues to obtain the latest versions. Other concordats had to be excluded from the analysis for practical reasons, because their corresponding action plans were either under review or being redrafted during the analysis period.

The concordats themselves also varied greatly, particularly in the structure and number of commitments, sub-commitments and guiding principles they contained. This diversity was then reflected in the action plans, which displayed a range of structures too. Some were well-organised, clearly aligning with their respective concordats' commitments, and included defined key performance indicators and assigned responsibilities. In contrast, other action plans were closer to working documents without explicit connections between actions and commitments. In these instances, we often had to infer those relationships, sometimes drawing on broader documentation to interpret the intended outcomes.

Mapping Actions to R&I Culture Themes and ambitions

We found that all the identified actions aligned with at least one of Loughborough's R&I Culture Themes ('Capacity for R&I', 'Community & Collegiality', 'Equity, Diversity & Inclusion', 'Professional & Career Development', 'Research Integrity & Openness', 'Role Models & Leadership', 'Recognition & Reward' and 'Working in Partnership'). Specifically, each action was linked to an average of 2.1 Themes. This strong coverage is likely to be expected, as our R&I Culture Themes were designed to be broad in scope and encompass the full range of research culture topics.

Some themes, however, appeared more frequently than others (**Table 2**). This likely reflects both the concordats included in the analysis and the level of detail in their corresponding action plans. For example, the action plans for both Athena Swan and the Race Equality Charter featured a significant number of actions planned by the University, which helps explain why 'Equity, Diversity & Inclusion' emerged as the R&I Culture Theme with the most assigned actions, exceeding 200 in total.

Table 2: Number of actions categorised by Loughborough University's Research & Innovation Culture Themes

Research & Innovation Culture Theme	Number of actions
Capacity for R&I	38
Community & Collegiality	51
Equity, Diversity & Inclusion	205
Professional & Career Development	88
Research Integrity & Openness	32
Role Models & Leadership	202
Recognition & Reward	141
Working in Partnership	11

Fewer actions directly mapped onto Loughborough University's unique R&I Culture Ambitions. However, some strong connections were evident. For example, 61 of the over 140 actions linked to the theme of 'Recognition & Reward' aligned with the specific ambition of 'enabling and rewarding a wider range of contributions from a wider range of staff'. These actions spanned multiple concordats – the Coalition for Advancing Research Assessment (CoARA), DORA, the HR Excellence in Research (HREiR) Award, the Race Equality Charter and the Technician Commitment – demonstrating clear alignment between the various commitments in these concordats and the University's ambitions for its research culture.

Identifying common action types

The thematic analysis of actions taken in response to our commitments to various concordats found no evidence of unnecessary, direct duplication. However, common groups of actions did emerge, highlighting potential opportunities for greater synergy. As a result, 20 distinct action types were devised as follows (**Table 3**).

Table 3: Number of actions categorised by action type

Action Type	Number of actions
Development and Review of Resources and Policy	78
Changes to Governance, Line Management and Oversight	70
Communication and Awareness	66
Training and Skill Development	63
Consultation and Engagement	54
Internal Data Collection and Reporting	46
External-facing Research and Analysis	43
Intervention Testing and Implementation	38

Student Support and Services	38
Recruitment and Induction Practices	32
Changes to Operational Systems and Infrastructure	30
Promotion and Appraisal Processes	29
External Engagement and Advocacy (includes Knowledge Exchange, Impact and Public Engagement)	28
Pursuit of External Funding Opportunities	28
Internal Funding and Resource Allocation	20
Events and Workshops	19
Mentoring and Coaching	15
Review of Career Progression Pathways	11
Specific Wellbeing Initiatives	9
Exit, Redundancy and Redeployment Processes	6

In our analysis, the most common type of action was related to the 'Development and Review of Resources and Policy'. Seventy-eight actions were coded as this action type, and those actions were being taken in response to commitments from seven concordats: the Athena SWAN Charter, DORA, CoARA, the HREiR Award, the Research Integrity Concordat, the Race Equality Charter and the Technician Commitment.

In contrast, the 'Exit, Redundancy and Redeployment Processes' category was the least common, with only six actions identified. These actions were linked to commitments from three concordats: the Athena SWAN Charter, the HREiR Award and the Race Equality Charter.

As before, the prevalence of certain action types likely reflects both the exact concordats included in the analysis and the level of detail in their corresponding action plans. The 'Development and Review of Resources and Policy' action type, however, might have been expected to be one of the more common, because policies and resources are often central to how institutions attempt to drive change across a wide range of areas. Similarly, 'Exit, Redundancy and Redeployment Processes' might be expected to be among the least common, as it pertains to a more defined set of actions and processes, specifically related to staff transitions, and is typically addressed in specific circumstances.

Using the Analysis to Support Strategy

The results of this analysis are being used in two ways to benefit the University's work to nurture a thriving research culture, related to a strategic gap analysis and the strengthening of synergies.

Identifying gaps in current activities

Mapping actions against Loughborough's R&I Culture Ambitions allowed us to identify areas where significant activity, driven by concordat commitments, was already in progress and where there were gaps. This insight proved crucial in helping us to subsequently plan how to prioritise efforts to best deliver our institutional ambitions for research culture.

For instance, those ambitions that already had a high number of actions linked to them were recognised as areas to monitor going forward but with no immediate need to add further effort. In contrast, ambitions with fewer actions tied to them were identified as gaps in our activity. These gaps were then prioritised for future work, including the development of new initiatives and the seeking of additional support targeted to deliver on these specific ambitions. We believe this approach will help us ensure that our resources are allocated efficiently and maximise our chances of delivering meaningful change for Loughborough University.

Coordinating efforts across concordats

Although there was no direct overlap, the analysis uncovered synergies between actions. By grouping actions into broader categories or 'action types', we identified similar activities being undertaken for different concordats, often by different teams across the University. This insight enabled us to connect these individuals and inform those responsible about related actions. Again, while no immediate opportunity to reduce workload has emerged due to us not detecting any direct duplication of effort, we feel that the potential for improved coordination and collaboration is clear. Following the introductions, the teams can now more effectively share insights and best practices and distribute the responsibility of monitoring and reporting, with potential to increase efficiencies by further aligning of efforts.

Conclusion and Future Directions

By connecting colleagues working on similar actions, we aim to foster collaboration, improve efficiencies and create opportunities for sharing insights across teams. Strengthening these connections will also help colleagues prioritise actions that support multiple commitments and ensure that future planning maximises impact across different concordats.

This analysis has already proven valuable, providing a clear picture of institutional activity at a useful moment for Loughborough's research and innovation ambitions. It has helped identify where efforts are well supported and where further attention may be needed, offering insights that will inform the development of meaningful indicators and the next steps in shaping institutional research culture ambitions.

We recognise that this is a snapshot in time and that its long-term usefulness will depend on further work. As additional action plans become available, we will revisit the mapping to address any gaps. We have documented the approach to ensure it can be referred to in future, and the increased awareness among those involved in concordat-related commitments should help sustain its relevance. However, we are still considering how best to maintain and update this work in the long term, particularly in terms of resource.

While questions remain about ongoing maintenance, this project has strengthened our understanding of how research culture commitments intersect. By building on these insights, we can take a more coordinated and strategic approach to enhancing Loughborough's research culture.

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Contributions

Megan English: Data curation, Investigation, Methodology, Project administration, Writing – review & editing

Stuart King: Conceptualization, Investigation, Methodology, Project administration, Supervision, Writing – original draft, Writing – review & editing

Megan English worked as a Research Culture Intern at Loughborough University in 2024, mapping and analysing activities related to concordats, charters and declarations the university had signed. She holds a Bachelor of Science in Psychology from Loughborough University and is currently a Project Support Officer for NHS North West London, providing project support and stakeholder collaboration to improve urgent and emergency care programs and reduce health inequalities across the region. She has previously worked as an occupational psychologist assistant for the Ministry of Defence, conducting research and analysing workplace culture within the Army Headquarters.

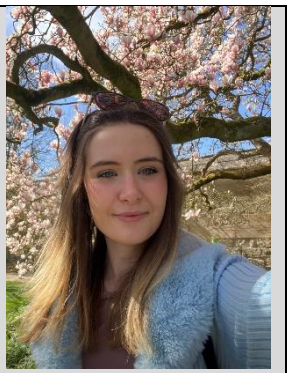

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Table 4: Research and innovation-associated concordats, declarations and charters – expanded to include links.

Appendix

Table 4: Research and innovation-associated concordats, declarations and charters – expanded to include links.

Concordat	**Useful Link**
Athena Swan Charter (2005, revised in 2015 and 2021)	https://www.advance-he.ac.uk/athena-swan-charter
Barcelona Declaration on Open Research Information (2023)	https://www.barcelona-declaration.org
Coalition on Advancing Research Assessment (CoARA) (2022)	https://www.coara.eu/
Concordat for Engaging the Public with Research (2011)	https://www.ukri.org/wp-content/uploads/2020/10/UKRI-151020-ConcordatforEngagingthePublicwithResearch.pdf
Concordat for the Environmental Sustainability of Research and Innovation Practice (2024)	https://wellcome.org/who-we-are/positions-and-statements/environmental-sustainability-concordat
Concordat on Open Research Data (2016)	https://www.ukri.org/wp-content/uploads/2020/10/UKRI-020920-ConcordatonOpenResearchData.pdf

Concordat on Openness on Animal Research (2014)	https://concordatopenness.org.uk/wp-content/uploads/2017/04/Concordat-Final-Digital.pdf
Concordat to Support Research Integrity (2012, revised in 2019)	https://www.universitiesuk.ac.uk/sites/default/files/field/downloads/2021-08/Updated%20FINAL-the-concordat-to-support-research-integrity.pdf
Concordat to Support the Career Development of Researchers (2008, revised in 2019)	https://researcherdevelopmentconcordat.ac.uk/wp-content/uploads/2022/01/Researcher-Development-Concordat_Sept2019-1.pdf (**Note:** The principles of this concordat are implemented through the HR Excellence in Research (HREiR) Award.)
Guidance for Safeguarding in International Development Research (2020)	https://ukcdr.org.uk/wp-content/uploads/2023/08/170420-UKCDR-Guidance-for-Safeguarding-in-International-Development-Research.pdf
HR Excellence in Research Award (2008, revised in 2019)	https://vitae.ac.uk/hr-excellence-in-research-award-april-2024/
Knowledge Exchange Concordat (2020)	https://www.universitiesuk.ac.uk/sites/default/files/field/downloads/2021-07/knowledge-exchange-concordat.pdf
Leiden Manifesto on Research Metrics (2015)	https://www.leidenmanifesto.org
More Than Our Rank Initiative (2023)	https://inorms.net/more-than-our-rank/
NCCPE Manifesto for Public Engagement (2008)	https://www.publicengagement.ac.uk/manifesto-public-engagement
Race Equality Charter (2016)	https://www.advance-he.ac.uk/race-equality-charter
San Francisco Declaration on Research Assessment (DORA) (2013)	https://sfdora.org
Technician Commitment (2017)	https://www.techniciancommitment.org.uk/
UKRI Statement of Expectations for Doctoral Training (2024)	https://www.ukri.org/publications/statement-of-expectations-for-doctoral-training/

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Warwick PATHWAY Programme: A positive action programme to facilitate Black researchers' careers

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Abstract

Underrepresentation of Black researchers and academics is one of the most pressing issues in the UK Higher Education sector. The University of Warwick launched the Warwick PATHWAY Programme in November 2023 to address this issue. The programme supports aspiring Black researchers in all disciplines from undergraduate to postdoctoral level to become independent researchers in universities and other organisations. We aim to create 'a career pipeline that does not leak' and a multi-level community of aspiring Black researchers, presenting a visible career pathway and support network.

Keywords: research; careers; inclusion; diversity

Introduction

Underrepresentation of Black researchers and academics is one of the most pressing issues in the UK Higher Education sector today. According to HESA data (**HESA, 2024**), 0.86% of UK Professors and 3% of all UK academics in 2022/23 were Black, compared with an 8.8% Black representation within the UK working-age population (**GOV.UK, 2024**) - the most severe underrepresentation by ethnic group. By comparison, Asian academics made up 7.6% of Professors and 11.7% of all UK academics in 2022/23, compared with 15.7% of the total working age UK population (representing the total of 'Asian', 'Indian', 'Pakistani, Bangladeshi' and 'Asian other' categories within the GOV.UK working age population data). Under-representation of Black academics is not just a problem highlighted in the UK, but is also well documented across universities in the USA (**Allen et al., 2000**).

Historically, Black researchers have been underrepresented in academia as various systemic barriers are thought to impede their career progression (**Ibid**). In recent years, several studies conducted across UK universities have revealed that ethnic minorities are underrepresented and face racism across all academic career stages, from PhD students to senior academic leaders (**Arday 2018, 2020**). For example, Black academics are frequently faced with microaggressions and an unfair scrutiny of their performance. Findings indicate that Black academics in UK universities experience injustice, and the problem is worse among non-British Black academics than British Black academics (**Adisa et al., 2025**). In particular, Black academics report that less qualified White persons are often selected for the positions they have applied to, contributing to unjust hiring and promotion processes. The experience of racism also differs across genders (**Stockfelt, 2018**; **Blell et al., 2022**). Anti-Black racism can lead to poorer mental health, exacerbated by the stigma surrounding mental health issues as a sign of weakness within their own community and within the White dominant professional community (**Arday, 2021**). To address these inequities, AdvanceHE's (n.d.) Race Equality Charter was established in 2015 as a sector-led charter mark that UK higher education institutions voluntarily participate in to assess their context, identify priority issues, and design and implement actions to advance race equality. However, ethnic minority academics, including Black academics, remain sceptical as to whether such a policy tool can bring about substantive change (**Bhopal & Piktin, 2020**).

In response, the University of Warwick has created a positive action programme, called the Warwick PATHWAY programme, to bring about real substantial improvement in Black representation at Warwick and beyond. Warwick's mission is to solve the most profound intellectual

questions and most pressing societal challenges faced by Black academics. We need all talents to do so. The PATHWAY programme builds on existing initiatives at Warwick to create a coherent programme of support across all academic disciplines.

Preventing Leaks in the Pipeline

UK universities, charities and learned societies have established a variety of positive action programmes aimed at addressing this issue by providing funding for research opportunities to Black researchers. These initiatives vary in scope from undergraduates (e.g., ASPIRE programme at Sheffield Hallam University) (**Awolowo et al., 2023**) to faculty members (e.g., Wellcome Accelerator Awards) (**Wellcome Trust, n.d.**), and disciplines. The current landscape of programmes is fragmented, as individual schemes typically support only one research career stage. This makes it difficult to navigate support for Black researchers throughout their career journey across UK higher education.

Consultation with Black researchers at Warwick, from undergraduate to senior academic levels, indicated that providing multi-level, sequential packages of financial support, networking and community-building could be important ways to counteract loss of talent at various stages in research career development. PATHWAY provides an opportunity to evaluate the effectiveness of offering multi-level support within a single institution in terms of stemming talent loss from the research career pipeline.

A Brief History of the Warwick PATHWAY Programme

Inspired by the Wellcome Sanger Institute's Excellence Fellowship (**Wellcome Sanger Institute, n.d.**), Warwick's Vice-Chancellor, Prof. Stuart Croft, tasked Pro-Vice-Chancellor (Research), Prof. Caroline Meyer, and (then) Academic Director for Research Culture, Prof. Sotaro Kita, in 2022 with developing a positive action programme for Black researchers at Warwick.

Kita consulted Black undergraduates, PhD students and academics, including a senior academic leader, Prof. Franklyn Lisk (then Academic Director for Africa), for their views on the key barriers to career development for Black researchers and potential interventions to support this. He then consulted with colleagues leading existing Warwick programmes and activities to support researcher career development to identify resources, frameworks and expertise which could support this. He also consulted the legal department to discuss legal implications and restrictions. By February 2023, the 'Warwick PATHWAY programme' was born.

On the 22nd of November 2023, we held a launch event for the programme, inviting Black alumni, current staff, and students to speak about the barriers they had faced and their hopes for the programme. One PhD alumnus cited a lack of funding continuity post-PhD as a key factor that contributed to their move away from an active research role, and into a research-related post supporting equity and diversity. They said they would have benefitted from an Early Career Fellowship to give them time to explore follow-on research funding opportunities.

Another speaker – a Black undergraduate student who'd recently completed a summer research project – said that though they were keen to pursue a career in research, they previously had little understanding of what this would entail, but carrying out their project had helped to address this:

> *I've always known I wanted to go into research since I was like, 17 – it was just trying to get to that pathway and knowing, for example, how do I work on an independent research project, how do I fit within the scientific community, how do I work within a lab. By doing the [undergraduate research project] I was able to attend lab meetings, see different kinds of students in their different career stages – if that was postdoctoral researchers, if that was PhD students or Masters students – I could talk to them, and that kind of collaboration was what I didn't kind of understand. I thought a PhD was just kind of solo, you would just do it by yourself, but this project has kind of shown me it's really collaborative and it's just made me want to do research even more.* (**Undergraduate Student Speaker**)

The importance of access to information about research careers was emphasised by a Black Professor who had tried to encourage promising Black undergraduates to progress to a PhD:

> *I had some brilliant undergraduates pass through me – brilliant, outstanding undergraduates with a high first [class degree] […] I tried to encourage them to pursue a research career. For one reason or another, they were not interested. These reasons stemmed from financial to "there are opportunities elsewhere", "it's a hard grind if you want to work your way through" and […], "how long will take for me to become a professor?"* (**Professorial Speaker**)

The Professor suggested that individual mentoring and sponsorship for Black students could prove critical to addressing such concerns, citing the example of having brokered an introduction to a supervisor for an aspiring Black PhD candidate who subsequently became a professor at Warwick within 12 years.

Opportunities to present and publish research at an undergraduate level, as well as opportunities to build networks with Black peers in relevant disciplines, were also cited as interventions which had helped speakers at the event to either consider or develop their research careers further.

We recruited the first cohort (27 undergraduates, 3 PhDs and one Early Career Fellow) to the PATHWAY programme during the academic year 2023-2024, with Victoria Strudwick leading on programme implementation since February 2024. In 2024, we established links for the programme beyond both the UK and academia. In May 2024, Strudwick secured support from Warwick and Stellenbosch University's joint seed fund to establish collaboration between PATHWAY and Stellenbosch's mid-career researcher support programme through joint online events, reciprocal mentoring, and mobility of participants. In 2025, we provided participants with opportunities to network with and hear about the careers of Black researchers working in different research settings, from the pharmaceutical industry to the University of Oxford. The programme has also established a collaboration with British Geological Survey in which has BGS provided funding (in addition to the Stellenbosch-Warwick seed fund) to enable a second PATHWAY PhD student to visit Stellenbosch in July 2025 and expand their research network beyond the UK. They will also share a report of their visit with BGS to inform the development of BGS's own EDI strategies and activities.

The PATHWAY Programme Structure

The programme provides four distinct levels of financial support, supplemented by a wraparound programme of networking and community-building activities which is open to all programme participants, as follows:

Undergraduate Research Support Scheme Awards (25 in 2023/24, 40 in 2024/25):

This provides bursaries of up to £1,500 each (**University of Warwick, 2025a)** as a contribution towards living expenses and other associated costs for undergraduate students to carry out 6-to-8-week research projects in the summer, under the supervision of academic staff at Warwick.

PhD studentships (up to three per academic year):

The scheme provides both tuition fees at the relevant UK or International rate (**University of Warwick, 2025b**) and a stipend for living costs at standard UKRI rate (**University of Warwick, 2025c**) for 3.5 years.

Early Career Fellowships at Institute for Advanced Study (IAS) (two per academic year):

This 9-month Fellowship (**University of Warwick, 2025d**) enables recent PhDs to undertake IAS's Accolade academic career training programme (**University of Warwick, 2025e**) and develop publications and external fellowship applications built on the outputs of their PhD. The fellowship awards a stipend to cover half of the Fellow's time - the other 50% of their time is free to undertake other work. The stipend is based on half of the standard UKRI Research Council PhD rate. In addition, Fellows receive £600 to support Fellowship-related activities (e.g., conference attendance, organising a workshop, dissemination activities), and have access to IAS's facilities, library and IT services at Warwick.

The Warwick PATHWAY career development grant for research fellows (up to five in 2024/25):

This is for career development activities (e.g., training courses, networking, developing a fellowship application) for postdoctoral researchers (up to £2,000 per award) (**University of Warwick, 2025f**). Supervisors must provide a statement to the effect that the funding will be used exclusively for the awardee's own career development.

In addition to this financial support, we run an enrichment programme of group events and networking opportunities throughout the academic year for researchers in the above schemes, with the aim of building a sense of community among aspiring Black researchers at Warwick and providing visible role models in different research contexts.

So far, the programme has included lunchtime talks from Black researchers at academic and non-academic research organisations about their research career journeys, and funded opportunities to participate in conferences for minoritised researchers.

After initially experiencing low sign-up rates for the lunchtime talk series, we surveyed participants to identify more convenient scheduling options and to gather suggestions for speakers. Subsequently, our first speaker event in March 2025, which was promoted to both PATHWAY and non-PATHWAY participants at Warwick, drew an audience of 13. Two PATHWAY participants (a PhD student and a postdoctoral researcher applied for and received £150 travel bursaries from the programme to attend the 9th Annual BME Early Career Researcher (ECR) Conference, 4 July 2025 at University of Kent (Canterbury).

The first PATHWAY cohort (entry in academic year 2023/24) comprised 27 undergraduates (in addition to the 25 ringfenced bursaries, two further awards were made available to PATHWAY applicants from the main URSS scheme), three PhD students, one Early Career Fellow and four

Postdoctoral staff members. In March 2025, a further 42 undergraduate bursaries were awarded for projects to take place in summer 2025. Recruitment to the three PhD studentships for entry in October 2025/26 is currently underway, and applications for the 25/26 Early Career Fellowships opened in May 2025.

Evaluation of PATHWAY

With our first cohort underway, social scientists within the Doctoral Education and Academic Research Centre at the University of Warwick started an evaluation of the programme in October 2025. The researchers are using a combination of qualitative and quantitative research methods to evaluate its effectiveness, involving both PATHWAY participants and those involved with developing and delivering the programme. The outcomes of the evaluation will be shared with the rest of the sector at the International Research Culture Conference, either in 2025 or 2026.

Conclusions and Future Directions

The Warwick PATHWAY programme was established to address under-representation of Black academics in UK universities and other research institutions (**Adisa et al., 2025**). The PATHWAY programme is a positive action intervention that provides opportunities for Black students and researchers to engage in research and build their careers in research. This should partly address the cynicism expressed by Black academics that real substantive progress has not been made despite the gradual adoption of policy tools such as Race Equality Chartermark by UK Universities (**Bhophal & Piktin, 2020**). The PATHWAY programme provides opportunities regardless of nationality and residence status, which is important given that non-British Black academics report a stronger sense of racial injustice than British Black academics (**Adisa, et al., 2025**). This programme, in the long run, should contribute to reducing underrepresentation of Black scholars among senior academic leaders in the UK (**Arday, 2018**).

There are several issues to which the Warwick PATHWAY programme needs to pay attention as it develops. We need to avoid tokenism for Black researchers supported by the programme and unfair burden on Black researchers to support the scheme (**Adisa, et al., 2025**). We also need to create a safe and welcoming community of aspiring Black students and researchers, without isolating them from a larger research community.

We plan to extend the spirit of the PATHWAY programme beyond Warwick by linking similar programmes across the UK to share best practice, creating a holistic UK-wide career pathway. We will also make a national career pathway more visible by co-creating a database of similar positive action programmes in other UK institutions. We hope to work in

collaboration with other institutions working in this space to secure funding to evaluate the effectiveness of this network in tackling the underrepresentation of Black researchers in UK Higher Education. This will contribute to the evidence base for best practice in positive action interventions.

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Creating an Inclusive Space for Research Conversations: A critical reflection

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Abstract

Within and across university departments, research seems to be much less discussed among colleagues – beyond small, existing coteries – during the conceptualisation and planning stages than showcased when already complete. Hierarchies, silos and lack of opportunities to engage may exclude individuals from potentially valuable research conversations, depending on status, contract type or access to existing research groups. Indeed, conversations about research across different, specialised interests seem to have decreased since the pandemic, hindering the development of new interdisciplinary relationships.

The project referred to in this critical reflection sought to foster inclusive conversations about envisioned or ongoing research through activities engaging contract researchers, professional services staff, research students and academic staff across levels. Using peer-coaching guidelines and question prompts, the project team, comprising members in diverse roles and career stages, co-created empathic, non-judgmental and non-hierarchical conversation formats and trialled these with 24 participants across different roles and career stages at a departmental event.

In this paper, we critically reflect on this attempt to create an innovative inclusive space for research conversations, explaining how the project team dealt with the challenges of silos and hierarchies and highlighting some of the tensions and difficulties involved in creating such a space. Reflective writing, discussions and survey questionnaires distributed during the project showed that intentional groupings and guided interactions did, to some extent at least, counter structural barriers in the service of an inclusive research culture, fostering mutual respect and support while encouraging research reflection.

Keywords: research conversation; EDI; inclusion; interdisciplinarity; peer-coaching; inclusive research culture

Introduction

The academic landscape tends to be characterised by structured hierarchies and silos that create barriers to wider conversations about research, particularly in the early stages of a project's development (**Olkanen, 2020**). In our experience, research-focused conversations, if they occur at all, generally relate to post-completion work, leaving formative dialogues unsupported. Accessibility is often determined by status in a hierarchy, excluding early-career researchers, postdoctoral fellows, teaching-focused and professional services staff and those on short-term contracts, and this poses a challenge to idea development and collaborative potential (**Roper, 2024**). Studies show, for example, that professional services staff face inequity of treatment (**Holmes, 2020**; **Pilgrim-Brown, 2024**), where they are alienated from research contexts overall, whereas they could be seen as research enablers (**Briody et al., 2021**). Watermeyer and Olssen (**2016**) also discuss equality, diversity and inclusion challenges in academia, arguing that contemporary research evaluation mechanisms can alienate researchers from their own institutions, particularly when performance metrics override collaboration and inclusive practices. When research is narrowly defined by externally imposed indicators, opportunities for collaborative knowledge creation and participatory dialogue shrink — especially for staff on fixed-term or teaching-only contracts, who are often structurally excluded from such evaluations (**Ibid**).

Past initiatives to enhance research collaboration, however, have mostly relied on top-down approaches to organising discussions according to pre-determined disciplinary or interdisciplinary themes (**Siedlok et al., 2015**) or *about* research culture while not necessarily actively enabling its development (**Wellcome Trust, n.d.**). These approaches tend to rely on the organisers' judgements about which participants will be potentially interested and, as a result, to whom invitations will be sent. People brought into discussion are usually those who are already established in related fields and who directly work on the selected theme, but this can exclude those whose work is not of obvious relevance, even though they may have an interest in discussion and insights to share (**Siedlok and Hibbert, 2014**). This could involve, for example, professional services staff, teaching-focused staff and academic researchers whose work does not already bear an explicit relation to the themes. Such exclusion reinforces existing silos and hierarchies and hinders the development of unpredictable, innovative connections between people's work (**Efemini et al., 2024**). There are also few guidelines available about how to facilitate meaningful research conversations (as opposed to assuming that meaningful conversations will occur simply by placing people in the same space).

In response to these perceived gaps, a Research Conversations project we have been involved in has been exploring the value and importance of creating spaces for and facilitating research-in-progress conversations (see Acknowledgments for more details). In this short article, we critically reflect on the project's initial attempts to address the challenges of silos and hierarchies via creation of an innovative, inclusive space for guided peer-to-peer research conversations.

Project Design: Process and Challenges

The project began with an attempt to see if the above starting assumptions about the need for more, and more inclusive, research conversations were shared within a larger group from a particular Social Sciences department in a UK university. Within the context of a questionnaire designed for this purpose – and of the project as a whole – research conversations (henceforth, 'RCs') were defined as 'relatively casual conversations about or relating to research, occurring (spontaneously) in informal settings'. All staff and research student members of the department concerned were surveyed. Forty-one questionnaires were completed, from a total staff and student population of 128. All but one of the respondents considered RCs to be extremely, very or fairly important as a contribution to positive research culture within a department, and 23 (56%) wanted to have RCs quite often or very frequently. However, 29 (71%) said they rarely or only sometimes had such conversations. A full report of the findings can be found in Supplemental File 1.[i]

In line with the questionnaire results, the project team considered its major tasks to be the development and evaluation of resources that can facilitate RCs. Instead of starting from scratch, the team drew on and adapted existing resources from a successful previous initiative for the Warwick International Higher Education Academy (WIHEA) which had been co-led by the principal investigator (**WIHEA, 2023**). These resources included an activity format, guidelines and prompt questions for peer dialogue about teaching that promote active listening and non-hierarchical relations.

Guided empathic, non-hierarchical interaction and reflection in peer-coaching dyads lie at the heart of the approach developed in this previous project, and it is this form of compassionate/collaborative interaction which was felt to be extendable to research-related conversations in the Research Conversations project. Besides peer dialogue resources, a quick-fire group Q&A game was also created as an additional RC activity.

The biggest challenge in developing the RC resources was ensuring inclusivity and relatability of the RC resources and thereby creating an inclusive conversational space that would value all higher education

professionals' expertise and invite everyone's voices and contributions. We wanted to ensure that anyone could engage with the resources and participate in conversations equally easily, regardless of their professional role, status, and career stage. The team appreciated that all higher education professionals, not just academic researchers, engage in and around research in one way or another. We therefore defined 'research' in a broad sense to include practitioner research and inquiry, and data analysis as well as academic research support done by professional staff. The team assumed that all higher education professionals can play a role in a culture of research collaboration and potentially have an interest in participating in conversations about research.

One key measure for dealing with the challenge of self-perceived lack of qualification to talk about research was to ensure inclusivity of project team composition, from the outset, by getting various roles and stages represented within the project team. The PI therefore invited departmental colleagues from various statuses, roles and career stages to join. Team members included research and teaching focused staff, teaching-focused staff, professional services staff, a fixed-term contract research fellow, and junior and senior PhD students.

The team deployed their diverse perspectives and expertise to develop and then trial the activity resources via two cycles of paired dialogues among team members and revising them based on whole-team reflective discussion. All members were asked to reflect on and evaluate the usefulness and relatability of the RC resources from the perspective of their own professional role and career status. At whole-team meetings, feedback was invited from all team members, generating discussions where improvements were made to the activities.

Research Conversation Activities

Within our project team and over the course of five team meetings, we developed and piloted guidelines/formats for two types of structured peer dialogue about research:

- Structured peer dialogue guidelines and prompt questions (see Supplemental File 2)
- Group Q&A card game (see Supplemental File 3)

We implemented and evaluated these activities at a June 2024 'Research Conversations' event for 24 participants from the same Social Sciences department. Including 12 research/research-teaching/teaching focussed staff, 2 professional services staff, and 10 research students. An overview of the programme for the event can be seen in **Table 1** (further detail has been provided in Supplemental File 4).

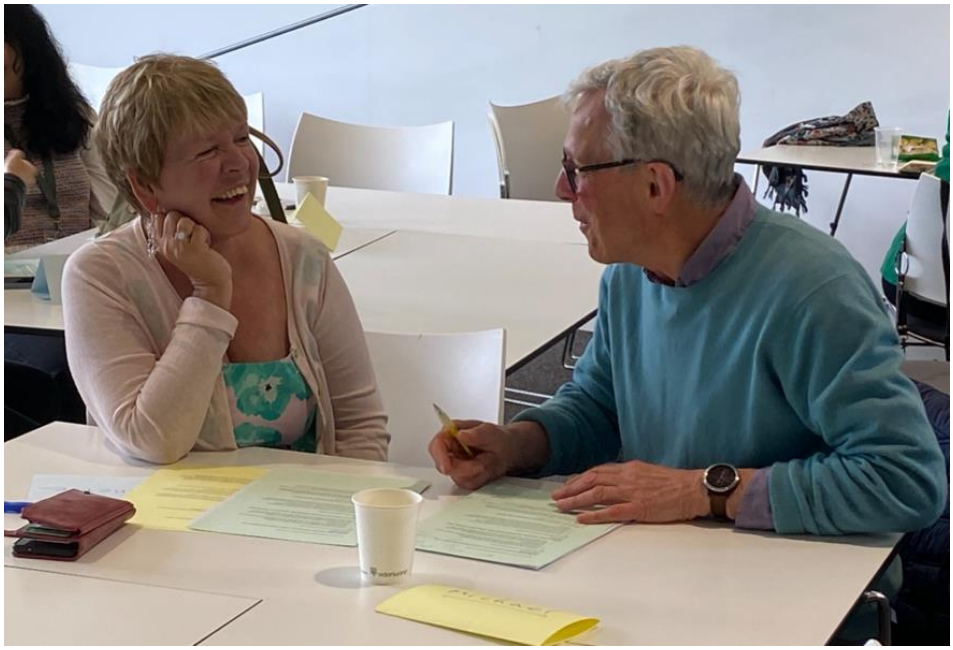
Table 1: Overview of event programme

Schedule	Activities
10:00	Introduction (including presentation of survey results and initial discussion)
10:45	Activity #1: Peer dialogue in pairs (and tea/coffee)
11:45	Activity #2: Peer dialogue in pairs
12:35	Lunch
13:35	Activity #3: Group Q&A game
14:45	Reflective writing (and team/coffee)
15:15	Evaluative discussion of activities
16:00	End

Peer dialogue

At the event, every participant was paired up twice, conducting a structured peer dialogue (**Figure 1**) with two different people. Each conversation was allotted around 40 minutes, with each partner taking an extended turn (20 minutes each) to talk about and be questioned about their involvement in and/or attitudes towards research. This activity was inspired by previous dialogues on teaching within WIHEA (**WIHEA PRHELC, 2023**).

Figure 1: Two participants in a structured peer dialogue about research. (Author image, participant permission granted).



To achieve the goal of countering silos and hierarchies, two aspects were believed to be key in organising peer dialogues. The first was cross-silo matching, namely, organising peer dialogue between participants from different professional roles (i.e., postgraduate research (PGR) student, professional service staff, teaching-focused staff and teaching- and research-focused staff). In the second conversation, we focused on the second aspect – that is, cross-hierarchy matching, between participants in the same professional role but at different career stages (e.g., 1st year PhD

and 3rd year PhD, or new staff member and senior staff member). In order to realise inter-role and inter-status matching, the project team had aimed for a balanced number of staff and students during the participant recruitment stage. To achieve this balance, the team considered it crucial to diversify event promotion methods by reaching out to different professional groups. It was expected that it would be more difficult to recruit staff members than PGRs, so the team sent not only centralised email and calendar invitations to all staff and students in the department, but also personalised ones to individual staff members. It was also anticipated that some teaching-focused and professional staff might not consider a 'research' event relevant to them, hence the project team additionally took a bottom-up approach by introducing the event and clarifying potential misunderstandings to colleagues of team members. Furthermore, at the event, in order to realise inter-role and inter-status matching, the team collected name badges from participants and intentionally paired them up across roles and different statuses with people with whom they were thought to rarely meet and talk.

The other important aspect was actively modelling empathetic non-hierarchical conversations. Before the peer dialogues, the team firstly asked participants to read conversation guidelines which explicitly highlighted the importance of the following: 'rapport, 'speak extensively', 'listen attentively', 'ask questions', 'reflect afterwards', 'respect confidentiality'. For the peer dialogue, participants were asked to go through the following three superordinate prompt questions, each accompanied by possible sub-questions, encouraging participants to share personal understanding and stories around research:

1. What does research mean for you, in your role/current status in the department?
2. What is your motivation for being involved with, doing and/or learning about research?
3. What do you aspire to in relation to research in the future?

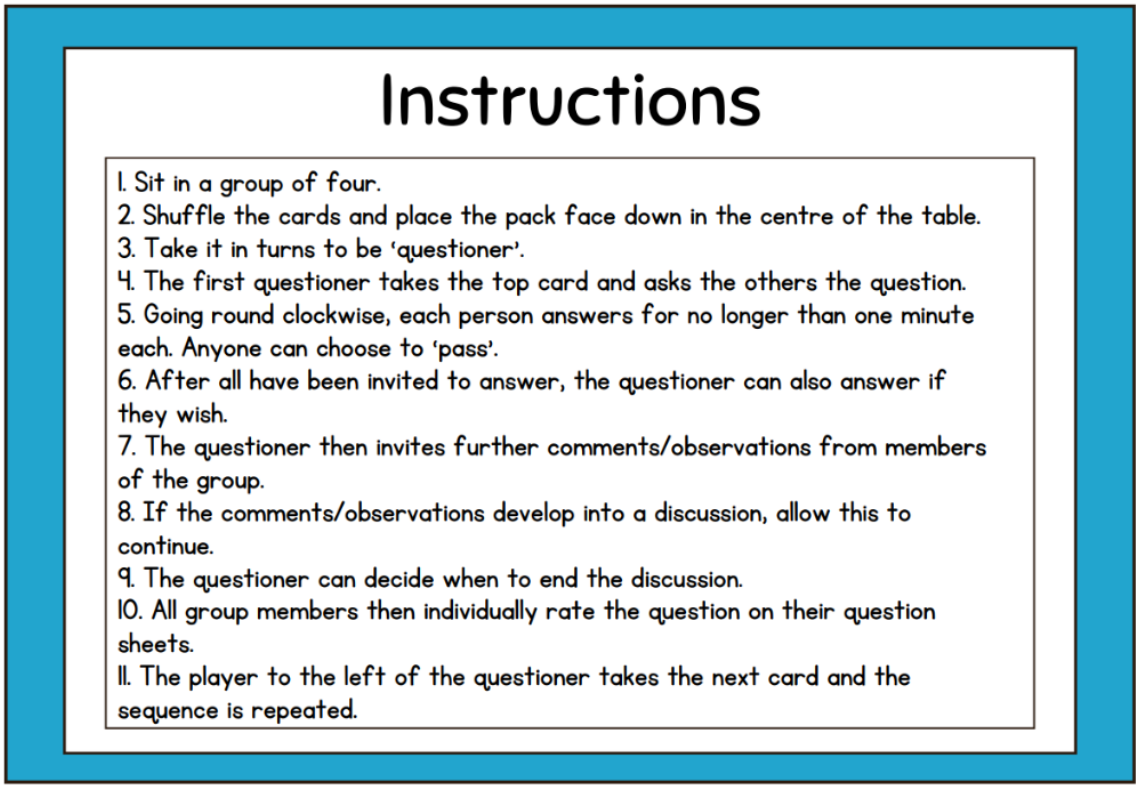
Research conversation group game

As in the peer dialogue, cross-role and cross-status mixing was also an important factor in the way the team formed groups for the game activity. This was a quick-fire conversational Q&A game designed to bring people from different stages and statuses together to share their views and experiences around the same issues. Around four people (e.g., a professor, a junior teaching-focused lecturer, a professional services staff member and a PGR student) were put together to form one group.

A deck of 30 question cards (see **Figure 2** for the first six of these) and a set of game rule instructions (see **Figure 3**) were provided to each group. Every group was expected to have several rounds of discussion. Group members took turns to pick a card randomly and to take the role of a questioner who would facilitate a group discussion about the question. Similarly to the peer dialogues, questions were designed to move participants beyond everyday transactional conversations and into expression of feelings and recounting of personal stories. In addition to there being personally oriented questions, the game format was designed to facilitate conversations of a relatively relaxing and playful nature, whereby participants could open themselves up to others.

Figure 2: Sample cards for the research conversations 'game'.

Figure 3: Instructions for the group research conversations game.



On the one hand, the game was intended to provide a casual and safe space for participants to share their personal stories relating to their professional roles and status, thereby enhancing attention to voices and stories that would usually be marginalised and invisible. The game also permitted participants to juxtapose and learn about different perspectives on the same issues and better understand other professional roles in the institutional ecology. Overall, it was intended to enable participants to discover connections and commonalities regarding shared challenges as well as aspirations (**Figure 4**).

Figure 4: One group playing the research conversation game.
(Author image, participant permission granted).

Critical Reflection

End-of-event reflective writing and discussion, as well as a follow-up survey, indicated that intentional grouping and guiding of participants to converse across role and status boundaries had effectively countered barriers to inclusive research culture and enabled discoveries of common ground in the area of research.[ii]

New affective connections and feelings of mutual respect and support were fostered, while, at the same time, the designed activities enabled useful reflection on one's own research and career development. This was the case for professional services staff as much as for other participants. One of the professional staff participants positioned themselves as being *'currently outside of the research bubble'* (**Participant A comments**), but they added that

> *…it is helpful to listen to experienced researchers at different points in their journey and to articulate my own thoughts in relation to possible future research*. (**Participant A comments**)

According to feedback, non-hierarchical, peer-to-peer conversations, emphasising empathy, non-judgmental engagement, and inclusivity seem to have been achieved overall at the event. The majority of participants judged the conversations useful and, as one participant said, they:

> *…helped me vocalise a lot of things about my research intentions. Talking to a peer [in the structured peer dialogue activity] gave me some new ideas about my research.* (**Participant B comments**).

However, as we critically reflected after the project day with reference to recorded discussion and evaluative writing elicited from participants, three issues for further discussion and investigation have emerged. Below, we have firstly conveyed and discussed our perception that verbal behaviour specifically within the structured peer dialogues may have been shaped according to an individual's position and sense of belonging within the academic hierarchy. Secondly, we reflect on the value of peer-coaching as a key format for these conversations, since this format encourages reciprocity, fostering a sense of mutual investment in each other's success. Thirdly, we recognise and address differing motivations for participant engagement and project intentions.

Hierarchy in structured peer dialogues: A shifting dynamic according to status of interlocutors?

The project aims to promote meaningful conversations across different levels of the academic community. In pairing across these levels, we not only sought to counter traditional academic barriers to research, but also to provide a unique platform for building trust and the co-creation of

knowledge, facilitating mutual learning and support. However, a theme in some participant feedback concerned the challenge of accommodating the project's non-hierarchical principles with deep-rooted academic norms. In evaluative writing after the peer dialogue activities, some of the participants mentioned that they perceived a shift in the dynamics of conversation depending on the status of the individual that they were in conversation with. For example:

> *In the second peer dialogue, I was paired with a senior colleague who I greatly enjoyed talking to; we actually did not follow the prompts closely, but still focused on the topic of research. In my case, my own PhD project, I found this conversation extremely useful and exciting. We did not want to stop talking even when the time was up. I realised that it sometimes might be important who you talk to [to] find the conversation fruitful, even if structured in a particular way.* (**Participant C comments**).

> *The two conversations I had were completely different, and I am not sure whether it was the way the dialogue was approached by us or the interlocutors themselves. However, this is only in terms of connection and personal enjoyment; information exchange and the quality of discussion was good. In both cases, I was felt a bit intense in the first chat, trying to follow the prompts closely and trying to make my PGR colleague comfortable. In the second peer dialogue, I didn't need to do that as connections happen naturally.* (**Participant D comments**).

Differences in the nature of the research conversations engaged in may then relate to the relative status of participants. In traditional academic settings, power dynamics often shape interactions, with less experienced researchers deferring to senior colleagues, and ideas from early-career researchers being overshadowed by those of more established scholars (**Papatsiba & Cohen, 2020**). Overall, while the non-hierarchical structure of the RCs enabled participants to develop a sense of belonging and community, assertions of power within pairs or groups may, at the same time, need to be further investigated and mitigated. We aim to research this further by inviting self-recording of some dialogues in the current extension of the project.

Structure of guided peer dialogues

With the aim of helping to bring down barriers and facilitate more inclusive and open dialogue, participants engaged in structured dialogues. Our project also adopted the principles of peer-to-peer coaching, where participants from all stages of their careers come together as equals.

Peer coaching shifts the focus away from hierarchical mentoring, which is often one-directional, to a more collaborative and equitable exchange of ideas (**Parker et al., 2015**). This goal seems to have been achieved, as one of the participants mentioned:

> *In my conversation with the PGR colleague, I felt we did not connect immediately, but this was resolved as we continued going through the prompts and the question[s] provided [... – these] were quite helpful as they guided us.* (**Participant E comments**).

However, different dyads used the opportunity in different ways, showing agency:

> *We did not use the questions in the order provided, but just picked up the ones we felt were the most relevant to our talk. Despite [having an] active conversation supported by the prompts, it felt like we were a bit constrained in the focus of our conversation.'* (**Participant F comments**).

> *We didn't use the [questions], but generally followed the guidelines because my partner and I were very talkative. We just start straight away with our stories.* (**Participant G comments**).

> *The guiding questions led the conversation going and sometimes we didn't address the questions.* (**Participant H comments**).

Although our intention was actually to respect participants' autonomy and agency to engage in the activities as they saw fit, reflecting on the structured dialogues we think that there might have been some who felt forced to hold their conversation in a certain way. For example:

> *I think the guidelines are a bit lengthy and wordy though even I understand they are made for good intentions. I wish the handouts could be clearer and shorter, with bigger fonts in printing.* (**Participant I comments**).

Overall, while the structured peer dialogue format showed the power of peer-to-peer engagement, empathy, and non-hierarchical dialogue in creating a more equitable and vibrant research environment, evaluative feedback showed that participants' autonomy and own creativity may need to be better accounted for:

> *Overall, I found the guidance and question prompts relevant to the conversational context. They were useful in creating meaningful interactions and connections, although the most enjoyable bit was the unstructured part in the beginning and in the end. Therefore, I would like to suggest developing strategies of facilitating less-structured chats.* (**Participant J comments**).

Relationship between our agenda and the participants' motivations/perceptions

The above led us back to thinking about our intentions and whether these reflected participants' own motivations to engage or not engage in particular kinds of RCs.

In the initial questionnaire we had circulated within the department (with 41 responses), one question asked about participants' primary motivation for participating in RCs. Looking back to the questionnaire answers, we remembered that: *'Interest and curiosity about research'* (11 responses) as well as *'Inspiration and expansion of perspectives'* (10 responses) were the highest-scoring motivations, whereas some were participating with the intentions of *'knowledge exchange'* (6 responses) and *'networking'* (4 responses).

In terms of the topics that participants said they would like to discuss when engaging in RCs in the department, the answers to a different question revealed diverse interests, as shown below:

- Possibilities of collaboration (29 responses)
- Emerging research trends (28 responses)
- Challenges and obstacles in research (27 responses)
- Research focus (26 responses)
- Methodologies and research techniques (25 responses)
- Research findings (25 responses)
- Bids for funding (20 responses)

Reflecting on the way we had organised the activities, we became even more aware of the complexity of organising such an event. The ultimate goal was to create a space where the status of an individual does not determine the value of their contribution, and where early ideas and contributions can be nurtured, critiqued, and supported without fear of judgment. However, in line with the insight discussed above that hierarchies cannot be ignored, some participants mentioned that they had benefitted from *'coming in contact with senior member of staff'* through these RCs. And, as one senior member of staff said in their reflective writing*, 'many of our PGs feel they don't necessarily get enough opportunities to talk to members of staff'* (**Participant K comments**).

By including voices that are often marginalised or excluded from formal academic discussions, these conversations offered a platform for underrepresented researchers and professional services staff to share their insights and experiences. Early-career researchers benefited from

the opportunity to articulate their ideas, receive constructive feedback, and build confidence in their intellectual contributions:

> *I had an extremely useful conversation with my partner. I introduced my project and was asked a series of questions. Introducing my project made me have a better idea of what I'm doing.* (**Participant L comments**).

The follow-up evaluation questionnaire showed that all participants agreed that the research conversations event had helped with self-reflection but quite a few reported that they did not particularly get any new ideas. This did not counteract our aim, but it did clarify better in our own minds – and enables us to assert – that research conversations should be seen as an aim in themselves rather than simply as a prelude, for example to large research grant proposals.

Conclusion

As participant feedback showed, the research conversation activities developed within the project offered a platform for collective knowledge-building, co-creation of ideas, and refinement of opinions and beliefs in real-time. We believe that the importance of these kinds of conversation extends beyond simply providing feedback on ongoing research. They are vital for creating a culture of collaboration and intellectual curiosity. When researchers engage in conversations about their work-in-progress, they open themselves to new perspectives, allowing for critical reflections that can challenge assumptions, refine methodologies, and introduce interdisciplinary approaches. Reflective writing elicited during the event itself illustrates that the project provided the *'[...] opportunity to, to break down [...] barriers and, and give people [...] opportunities'* (**Participant M comments**). The excerpt below illustrates and encapsulates well how participants found the project activities very inspiring:

> *'I think one of the key things about research in a university is that it's very hard to do because there are so many other things and other pressure on you. So almost the one advantage of days like today is it's sort of inspirational enthusiasm that you generate in these discussions because there are so many things that are sort of discouraging you to do research that it's nice to get the reinforcement of a day like today where you can go away thinking, ah, yes, I have left that on the back burner too long. I need to re-look at that piece of research. Or I have had problems that I discussed with other people and I now see a way forward. So, in a way what I think is the most advantageous thing about these sorts of meetings is the fact that they are inspiring us all to realise how much we like doing it.'* (**Participant N comments**).

Moving forward, however, the project team is not complacent, and we recognise that, while we wish to continue to explore and implement RCs, it is necessary for us to continue to ensure that all voices are heard, all ideas are valued, and all participants in events like these have the opportunity to contribute to the co-creation of knowledge. We now aim to explore how interdisciplinarity and inclusion can be further achieved via structured communication activities, with a renewed emphasis on mitigating power dynamics within the further RC events we aim to organise.

Acknowledgements

The project reflected upon here was titled 'Countering silos and hierarchies through peer-to-peer research-in-progress conversations' and ran from April to July 2024. The team members were: Ayten Alibaba, Joana Almeida, Miriam Schwiening, Richard Smith (PI), Lila Tennent and Yvette Yitong Wang.

The project – and an ongoing Phase Two extension (October 2024–July 2025) with the same title – was funded by the University of Warwick Enhancing Research Culture fund.

More information about the project, as well as all the supplement materials mentioned in the article, can be found online.[iii]

We would also like to express our gratitude to the individuals featured in the photographs for permitting us to capture and use their images in this article.

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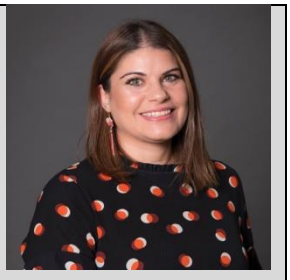
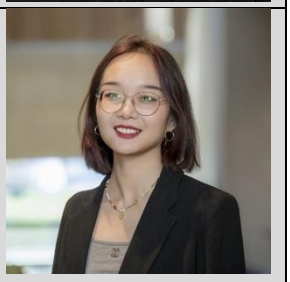


Richard Smith is a Professor in the Department of Applied Linguistics at the University of Warwick, where he has taught for 25 years, at BA, MA and PhD levels. His main research interests lie in the fields of history of education, practitioner research capacity-building and teacher development and he is PI of the project referred to in this article.



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List of Images

Figure 1: Two participants in a structured peer dialogue about research. (Author image, participant permission granted).

Figure 2: Sample cards for the research conversations game

Figure 3: Instructions for the group research conversations game

Figure 4: One group playing the research conversation game. (Author image, participant permission granted).

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Endnotes

[i] Editors' note: The supplementary files for this article can be accessed on its online landing page (https://doi.org/10.31273/eirj.v12i3.1858) or via the authors.

[ii] *Research Conversations Away Day: Follow Up Evaluation Questionnaire* (2024) results available at: https://warwick.ac.uk/research/research-culture-at-warwick/counteringsilos/report_on_the_followup_evaluation_quesitonnaire.pdf [Accessed: 6 August 2025].

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From Research to Reach: A doctoral researcher's experience in engaging the public through accessible research communication

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Abstract

In this article, I reflect on my experience organising an international public engagement festival as a doctoral researcher specialising in interactional research, sharing my observations and insights on accessible research communication strategies. Initially immersed in producing academic outputs and assuming that engaging with potential users was not part of my role as a doctoral researcher, my experience of organising the Pint of Science festival shifted my perspective on the societal relevance of my work. Central to this reflection is the importance of fostering a cross-disciplinary, cross-level team environment that encourages diverse perspectives and collaborative decision-making. Another key takeaway from my involvement in the festival is the power of accessible communication strategies, like multimodal metaphors, in making complex research comprehensible and engaging to a non-specialist audience. This reflection also touches upon my preliminary thoughts on the need for a creative and transdisciplinary approach to research communication, where knowledge and research communication strategies are co-created with non-academic stakeholders. Ultimately, I allude to how research culture can evolve to be more inclusive and participatory, ensuring that research is communicated in a way that leads to a tangible societal impact beyond academia.

Keywords: public engagement; research communication; accessible communication; research impact

When Research Meets Reality

A confession from an interactional researcher

I would like to begin this reflection with my personal journey as an interactional researcher. Pursuing a PhD in Applied Linguistics, I have been driven by one question: 'How do humans interact?'. For the first two years, my days were consumed by analysing transcripts, deciphering the nuances of conversation, and uncovering interactional patterns. Immersed in my work, I rarely engaged with colleagues or considered the broader purpose of my research beyond academic outputs, feeling intimidated by the prospect of discussing my research publicly.

In my third year, I ventured outside my comfort zone to deliver a public talk on one of my findings: how shared laughter helps cope with relational challenges in group interactions. The audience consisted of non-specialists, including professionals from various fields. During the Q&A, someone asked: 'How do you view group work in workplaces where people may rarely laugh, even during moments of tension?'. Although the question initially felt unrelated, it became a turning point in my work. I realised how unprepared I was to connect my research to practical concerns beyond academia. This wake-up call highlighted my oversight in bridging academic findings with real-world needs.

As a researcher studying human interaction, I was struck by the irony of my inability to connect and interact meaningfully with those who might benefit from my work. This realisation prompted me to reflect critically on my research communication and to explore how academic knowledge could be disseminated more effectively. This reflection also led me to organise public engagement (PE) events and seek strategies for accessible research communication.

A growing awareness of research impact and public engagement

The concept of 'impact' has gained prominence in UK academia. The 'Guidance on submissions' for Research Excellence Framework 2021 emphasise on producing research that realises 'the effect on, change, or benefit to the economy, society, culture, public policy or services, health, the environment, or quality of life, beyond academia' (**Research Excellence Framework, 2019: 68**). My understanding of this concept deepened as I became involved in organising the Pint of Science festival (see section below). Initially, terms like 'impact' and 'stakeholder engagement' seemed distant to me as a doctoral researcher. Still, their increasing significance in assessing scholarly work and researcher performance pushed me to reconsider the societal relevance of my research and explore ways to extend its influence beyond academic publications.

PE has emerged as a vital tool for achieving impact, with organisations such as the National Co-ordinating Centre for Public Engagement underscoring its importance in driving transformative changes in research culture (**NCCPE, 2023**). Emphasising mutual relationships between research and society (**Burchell et al., 2017**), PE should not be regarded as a one-way transfer of knowledge but as a dialogic, participatory process that fosters mutual understanding. By engaging with stakeholders in accessible, inclusive settings, researchers can make their work more relatable and applicable to real-world contexts.

This reflection is grounded in my experiences with research communication to the public and my growing awareness of the importance of impact and PE as embodied in my PE event organisation. It will proceed by sharing insights from leading a cross-disciplinary, cross-level team for an international PE festival, followed by observations on accessible research communication strategies, and concluding with thoughts on fostering an inclusive research culture that transforms the public from passive observers into active participants in the research process.

Sipping on Science in the Pint of Science Festival

A platform fostering scientific exchange and public engagement

NCCPE (**n.d**.) suggests that PE fosters trust between universities and the public, enhances relevance between research and real-world issues, and enables universities to enact their social responsibility by making research more accessible and inclusive. Realising impacts and promoting PE are therefore crucial for ensuring that universities remain open, transparent, and connected to the communities they serve. Having established the necessity of PE and impact, what comes next? Creative, non-academic conversations, such as those over drinks, can be powerful in connecting researchers across disciplines and engaging with the public beyond academic settings.

I began volunteering for Pint of Science festival (PoS) in 2023 and later led the 2024 festival across Coventry, Leamington Spa, and the University of Warwick campus (**Figure 1**). Founded in 2013, PoS is a global PE initiative fostering meaningful exchanges between researchers and the public. Typically, these events are hosted in cosy bars, pubs, and cafes, where audiences can enjoy the richness of scientific knowledge while sipping on their choice of alcoholic or non-alcoholic drinks. Interacting over a pint to discuss research stands in sharp contrast to the way we traditionally learn in school classrooms.

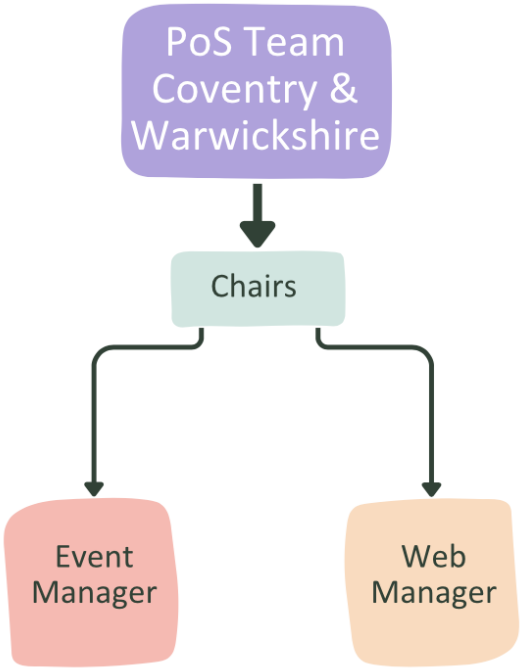
Figure 1: Pint of Science (PoS) 2024 event snapshot taken by Yanyan Li

PoS stimulates equitable interactions between researchers from all disciplines and the public alike, aiming to spark interest in a wide range of scientific topics, from those close to home to those with global significance. The conversations it empowers are inherently cross-disciplinary and cross-level, shaping not only the event itself but also its organisation and execution (see section below). By amplifying public voices, the festival takes the first step to integrate them as active contributors to research impact. Researchers are encouraged to communicate their work as approachable disseminators and educators rather than distant experts, using methods that engage attendees in shared learning experiences. This inclusive ethos reinforces the relationship between science and society, turning academic findings into relatable and actionable knowledge (**Paul & Motskin, 2016**).

A cross-disciplinary and cross-level dialogue in festival organisation

My foray into organising PoS involved multidisciplinary and multi-level teamwork, uniting researchers from diverse disciplines and degree levels. The 2024 team (**Figure 2**) included 13 undergraduate (UG) and PhD students spanning sciences and social sciences, offering complementary perspectives that enriched the festival. Our team worked with 18 speakers from the social sciences, arts, and sciences at the University of Warwick and Coventry University. Our events engaged over 200 attendees, with a small portion being academics from the two universities, while the majority were local residents and non-academic professionals from various sectors.

Figure 2: PoS 2024 team structure



By 'multidisciplinary', I here refer to leading a team of student researchers who contribute their 'different modes of expertise to bare on the decision-making process of a team working within a community-based setting' (**Housley, 2003:15**). 'Multi-level', as suggested by the name, means the inclusion of student researchers from diverse degree levels in my team, overturning the assumption that only students enrolled in research degrees are eligible for research communication events. As the team leader and a doctoral researcher, I observed numerous benefits of intentionally nourishing such a multidisciplinary and multi-level environment .

The first benefit was that working in a multi-level team enhanced members' ability to navigate power dynamics arising from perceived knowledge gaps. One of my UG teammates shared her initial fear of being overshadowed by PhD students and believed her contributions might be undervalued. She thought that undergraduates were seen as less experienced and knowledgeable in research. However, as the team collaborated, she gradually gained confidence. She became proactive in contributing to decisions about speaker rehearsals in her sub-group, which included one UG and two PhD students. She also valued the communication ground rules I set, which emphasised equality within the team. These rules made her feel comfortable communicating with her PhD teammates, openly sharing her thoughts, and seeking their advice on improving the presentation from a layperson's perspective. The PhD students actively sought her input, building on each other's ideas for better collaborative decision-making. She did not feel marginalised by the

PhD researchers despite their greater experience in research and communication with academics. Instead, she felt she had an equal role in the team, especially when reviewing the presentation and liaising with the researchers. She expressed that she felt a sense of ownership in organising the festival rather than being subordinated to the PhD researchers. This experience boosted her confidence in navigating multi-level teams in the future.

Her candid reflection gave me a sense of pride in coordinating the team but also led me to reflect on how participation in a multi-level team can help student researchers connect across different academic levels, creating an environment where everyone feels empowered to collaborate confidently. Her insights highlighted the key benefit of joining a multi-level team for a public research communication event: it can help mitigate perceived inequalities and prevent negative interpersonal effects that might stem from differences in degree levels, knowledge, and resulting power hierarchies. As a team leader, this experience reinforced the critical role of fostering an inclusive environment, where power dynamics based on academic level or perceived expertise are consciously minimised. I learned that by co-developing communication rules that affirm the equality of all voices, regardless of experience or degree status, team members feel valued and respected for their unique contributions. This approach does not just create space for diverse ideas to be heard, but it also actively cultivates a culture of mutual respect, where each member feels confident and responsible for the team's success. It enhances team cohesion, collaboration, and nurtures a sense of ownership, allowing each member to thrive, regardless of background or expertise.

The second benefit was that immersion in a multidisciplinary setting encouraged us to challenge established disciplinary boundaries, step out of our comfort zones, and apply our expertise to unfamiliar fields. This not only exposed us to new knowledge but also proved relevant in various aspects of our lives. As mentioned earlier, the cross-disciplinary nature of PoS required me to move beyond my usual social circle of Applied Linguistics PGRs, recruiting researchers from different disciplines. This helped ensure my team represented a diverse range of fields, mirroring the cross-disciplinary nature of the event itself. It also enabled us to effectively tackle specific organisational tasks, such as liaising with speakers from different fields and reviewing the accessibility of their presentations before the event.

For example, during rehearsal sessions, presenters received feedback from one or two organising team members outside their respective fields. This allowed presenters to refine their language and presentation styles to make the information more relatable and engaging for a diverse audience.

In one instance, a psychologist presenting on the connection between sleep quality and self-harm received valuable input from Life Sciences teammates, who suggested including practical tips on improving sleep quality to make the presentation more accessible and sensitive to the potential emotional triggers for the audience.

In another case, a data scientist gained insightful feedback on effective storytelling from an applied linguist teammate. She had initially presented a dense quantitative analysis on refugees' access to AI technologies, but the linguist suggested replacing part of this with a narrative about her personal motivations and the research process, which made the information more engaging and relatable. Similarly, a social scientist received input from a medical teammate on how to use metaphors to present the stigmatisation of endangered and minority languages. The medical teammate, drawing from her own experience in presenting complex material, suggested using food metaphors to make the topic more accessible and engaging for the audience.

Ultimately, through keen observation of my teammates' performances and the feedback gathered during our monthly meetings, I realised a striking benefit of being part of a multidisciplinary team: it immerses researchers in a dynamic exchange of perspectives, allowing them to explore new intellectual territories and engage in cross-disciplinary dialogues. This process not only enriches their own knowledge but also prompts the integration of different disciplinary viewpoints, enhancing our understanding of research communication (**Borrego & Newswander, 2010**). By embracing these intellectual collisions, we researchers transcend the boundaries of our immediate expertise and forge meaningful connections between disparate fields. These connections have the potential to foster future collaborations, ignite transformative ideas, and nurture a platform for ongoing exchange. In fact, some student researchers went on to form lasting connections, develop projects together, and continue supporting each other through the remainder of their university journey.

By promoting both multidisciplinary and multi-level teamwork, as well as cross-disciplinary and cross-level dialogue, the PoS festival evolved beyond a mere event. Consistent with Winter's (**2019**) conclusion of multidisciplinary teamwork, this was an opportunity to unite individual researchers who had not previously met or worked together. From my perspective, it became a cradle for inclusive and collaborative research communication and dissemination that began within the team and expanded outward to effectively engage with the public.

An Inclusive Research Culture

Accessible research communication: a case of multimodal metaphor

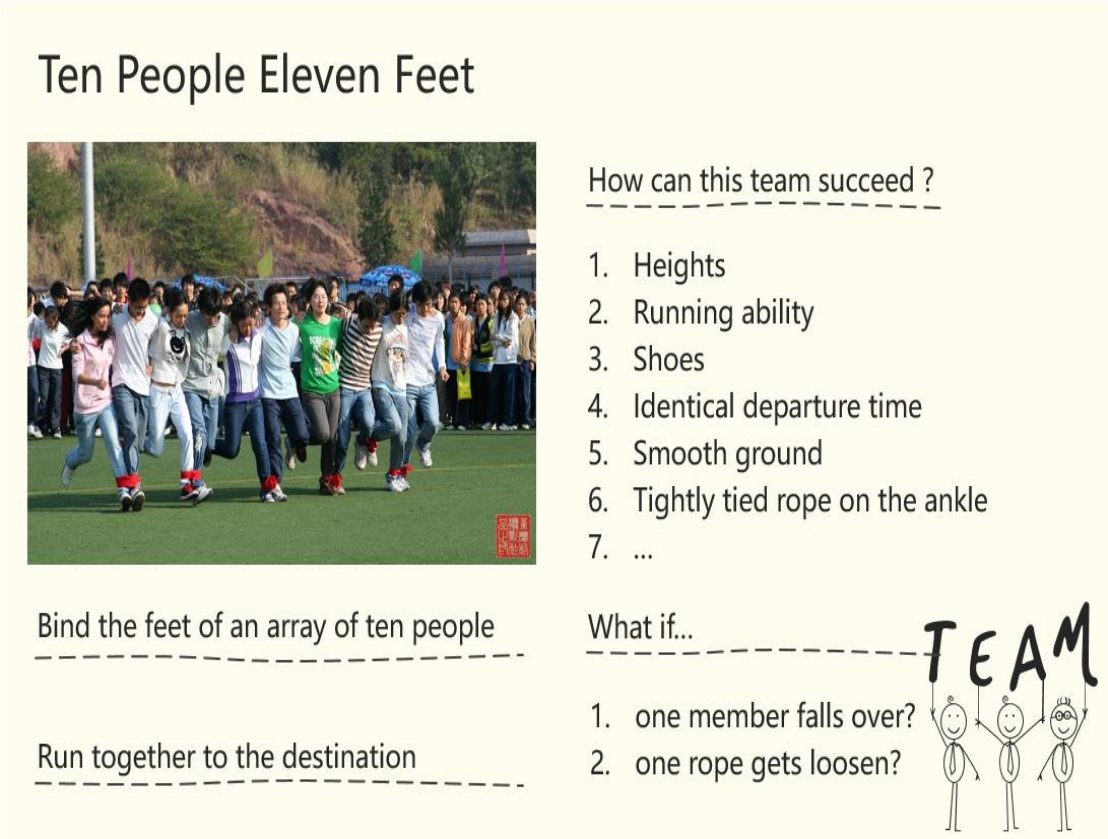
Since becoming involved in various events organised by the Warwick Institute of Engagement , I have increasingly been confronted with the term 'accessible' in relation to presenting research. This has led me to reflect on what accessibility means in communicating with non-academic audiences, inspiring me to observe the communication strategies that foster research for all and to consider how researchers can better understand and support the public (**Mahony & Stephansen, 2017**). Apart from communicating insights into how to present research to lay audiences based on our own disciplinary expertise and research experience, another pivotal takeaway from the PoS festival was the crucial role of accessible communication strategies. These strategies, internalised by presenters during pre-event layperson review and deployed in real time, were indispensable for effectively conveying their research to the public. They not only augmented public understanding but also emphasised how research can be visible and comprehensible to the public as an initial step to incorporate non-academic stakeholders into the process of applying research and realising its impact. By deliberating on these issues related to the operationalisation of accessible research communication, I therefore embrace my identity as an applied linguist and reflect on how my expertise informs my understanding of how communicative resources can make a difference in representing and transferring knowledge.

Specifically, as an applied linguist specialising in multimodal communication, I have been captivated by how language and other semiotic resources are configured to create meaning and achieve specific communicative purposes in particular social contexts for intended audiences throughout my research journey. This core focus of my intellectual curiosity resonates deeply with what stood out to me during the festival. By 'semiotic resources', I refer to 'a set of resources, shaped over time by socially and culturally organised communities, for making meaning' (**Jewitt et al., 2016:15**), with language being one of the informative resources. Besides language, other semiotic resources encompass nonverbal elements, such as visual aids, which were among the resources most frequently utilised by presenters. These resources were skilfully orchestrated to substitute for unnecessary jargon, avoid inaccessible abstractions, and illustrate terminology and research concepts in an engaging, relatable, and captivating manner.

One particularly effective and widely adopted strategy by presenters during the festival was the use of multimodal metaphors as a means of accessible research communication. It is a property of human thought that

aids us in interpreting the abstract and obscure through reference to something concrete and familiar **(Lakoff & Johnson, 2008**). Metaphors, such as sub-technical metaphors mentioned by Cameron (**2003**), provided presenters with an instrument to mediate between everyday language and technical terminology. In **Figure 3** (below), for example, is a slide from a presentation on managing group relationships through shared laughter, where speaker A employed the pictorial metaphor 'Ten People, Eleven Feet', a recreational sport, to vividly depict the dynamics of group relationships. The relationship being examined was conceptualised as a rope binding the feet. The delicate moments of interaction, where relationship work required attention, were compared to the strategic elements of the game, specifically when one partner stumbled or when the rope loosened. Because the metaphor clarified the equipment requisite and the process for the sport in detail, it assisted the audience in comprehending the interactional phenomena where relationships got ruptured and remedied within a group of people and the significance of managing relationships for group work.

Figure 3: Screenshot of speaker A's slides (included with permission)



Furthermore, the metaphor was not only instrumental in facilitating knowledge transfer but also in constructing a shared understanding, a neutral third space for alignment among event participants (**Drew & Holt, 1988**), including presenters. As Cameron (**2008**) highlights, metaphors can promote sustained alignment that transcends both spatial and temporal boundaries, while simultaneously reducing the social distance between participants. Since the metaphor used by speaker A, drawn from everyday recreational sports, was less technical and cognitively demanding than academic terminology, its familiarity and relevance to daily speech and life may have left a lasting impression on the audience. This familiarity stemmed from the fact that the audience likely encountered similar scenarios delineated in the metaphor with some frequency in their own lives.

Additionally, metaphors carry affective impact and transmit the speakers' values and attitudes (**Graumann, 1990**), mediating their relationships with the audience in terms of doing research. This metaphor in Figure 3 is organised in a culturally familiar imagery, accompanied by additional words to enlighten further thinking. By occupying more than a quarter of the slide space, the image delineating the metaphor became prominent to the viewers, enhancing the accessibility of the content and focusing their attention on the message it communicated about the presentation topic. The use of visuals was an effective strategy for capturing attention and enhancing engagement, particularly when conveying potentially technical research content. More importantly, through this metaphor, the speaker moved away from the moment-by-moment analysis of interactional research and instead highlighted the broader implications of her work. She encoded and implied why understanding relationship dynamics in interaction is important and how the audience can apply these insights to improve their daily relational interactions. In doing so, the distance between the presenting researcher and the audience could be decreased, as the knowledge was presented in a way that was not meant to be solely owned or understood by the researcher but shared and comprehended by everyone present.

At first glance, I observed that multimodal metaphors are powerful tools for connecting complex concepts with everyday experiences. On a deeper level, they highlight the importance of reconceptualising knowledge to make it down-to-earth, building relevance between research and lived realities, and delivering content in an engaging way. This approach helps demystify potentially opaque topics for the public, amplifies the relevance and impact of research for its stakeholders, and paves the way for tangible, meaningful changes of our society. Such accessible research communication techniques can be deemed invitations from researchers to

the audience to join the research journey, constituting a welcoming and inclusive research culture.

Towards a creative and transdisciplinary approach to research communication

The PoS Festival demonstrated the potential of cross-disciplinary and cross-level collaboration in making research accessible and meaningful among researchers and to the public. However, reflecting on its outcomes, a critical question sprang to my mind, 'How can such events spark sustained, transformative societal impact?'. My thoughts lingered on the potential of a transdisciplinary and more creative approach to research communication, which offers a compelling path forward by building on the inclusivity and dialogic principles discussed in the previous sections.

Some argue that creativity in research does not necessarily require being unprecedented, but it can often be unlocked by refining and innovating upon conventional methods (**see Kara, 2015**). This perspective holds particularly true for how research is represented and communicated, which is an integral part of the research process itself. Such an approach aligns with the growing call to transcend disciplinary boundaries, equipping us to tackle complex challenges that surpass the limitations of traditional disciplinary approaches. In this context, achieving transdisciplinarity emerges as a promising path forward.

Transdisciplinarity embodies the highest level of cross-disciplinary integration, prioritising the translation of research findings into actionable solutions for social problems (**Hall et al., 2019**). This approach is characterised by the active engagement of real-world actors, such as community stakeholders, throughout the research process (**Pohl & Hirsch Hadorn, 2007**). In the realm of research communication beyond academic audiences, transdisciplinarity and creativity emphasise the inclusion of non-academic stakeholders in both the design and implementation of research communication strategies.

While the festival brought together researchers from varied fields and levels, the focus remained on facilitating knowledge sharing within academic and public spheres. A transdisciplinary and creative approach can extend this by actively integrating non-academic stakeholders, such as community leaders, policymakers, and industry practitioners, into the research communication process. This inclusion would enable researchers to craft research dissemination and co-create solutions with non-academic stakeholders that reflect diverse perspectives and lived experiences.

As I continue organising the PoS 2025 and exploring how language use and communication strategies facilitate the spread of research into public domains, I find myself asking: 'Could communication methods incorporate

public narratives and cultural knowledge?'. By fostering an equitable, two-way dialogue where the public shares insights on how they prefer research to be communicated, we can shift research communication from a unidirectional act of dissemination to a collaborative process of co-creation.

The festival's informal atmosphere and salient use of accessible communication techniques, like multimodal metaphors, underscored the importance of accessibility and relatability in research communication. However, for me, embracing transdisciplinarity and creativity require reimagining how we present and demonstrate research, as well as how the public can participate in it. This involves prioritising the formats that propel sustained engagement. This reflection resonates with my perspective as an interactional researcher who values the transformative power of facilitating interaction. Incorporating more interactive designs, potentially enhanced by technology, and initiating long-term engagement projects can tackle real-world challenges. I suggest, for example, that an engagement project designed to enhance migrants' interactional competence in their second language, specifically within the Coventry community, could be a potentially impactful project. These efforts can hopefully strengthen the public's agency to effect meaningful changes in their lived realities through research while also vitalising their role as disseminators of their own research. In the meantime, this would empower participants to actively shape solutions, envision pathways for addressing these issues, and transition from passive listeners to engaged, active contributors in the research process.

Concluding Remarks

Looking back on my journey as a doctoral researcher, I now realise how much my perspective has evolved. Initially, my goal was simple: to contribute to my field through rigorous academic research. I immersed myself in data, analysed interactional patterns, and aimed to make academic contributions. While valuable, I soon noticed a gap – my work had academic merit, but I had not given enough thought to how it connected with the real world.

This became glaringly clear during a public talk on the role of shared laughter in group interactions, when an audience member asked why it mattered to them. It struck me as a call to action. Despite my academic rigour, I had failed to make my research accessible and meaningful to non-academic audiences. I had been so focused on academic discourse that I overlooked the broader conversation my research should be a part of.

It was through my involvement in initiatives like PoS that I began to reconsider what research communication could and should be. As a team leader, I realised the significance of fostering conversations across disciplines and levels, where research becomes a shared space, accessible to all. This journey of turning complex scientific findings into relatable, accessible knowledge mirrored the very challenges I faced in my own research. My experience indicated that translating interactional research into meaningful dialogue requires more than just simplifying language. It demands creative, inclusive communication that invites diverse voices and ensures that research is not just for the academic community but also includes the wider public. To move beyond the episodic nature of events like PoS, I advocate that researchers must envision research communication as an iterative, participatory process. Transdisciplinary, creative and accessible research communication is not just about breaking down silos but about creating spaces where knowledge is co-produced, shared, and applied to address societal challenges.

This realisation deeply impacted how I now view my work. Rather than limiting research to academic outputs, I have begun to appreciate its true value when it sparks dialogue and fosters cross-disciplinary, and cross-level collaboration. By shifting the focus from exclusive academic discourse to accessible, engaging conversations, whether at a festival like PoS or in everyday interactions, research takes on new relevance. It becomes actionable; it connects and becomes a tool for societal transformation.

Looking ahead, I am determined to continue evolving my research with this mindset. Reflecting on my experiences with the PoS festival has solidified my commitment to ensuring that my research speaks to people's lives and shapes the world around us. These reflections have also reinforced the understanding that research is most impactful when it engages both the mind and the heart and invites diverse voices. By embracing collaboration, inclusivity, and accessible communication, research has the power to break down barriers and ignite impactful progress. By embedding transdisciplinary, creative, and accessible principles into future research communication initiatives, I hope we doctoral researchers can help cultivate a research culture that is not only inclusive but transformative, ensuring that tangible research impacts are engendered and extend far beyond the confines of academia.

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Time to Write: A necessity, not a nicety

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Abstract

In this critical reflection we will explore our Time to Write project, providing a brief overview of our work, followed by discussion of expected and unexpected benefits, and the knowledge and skills leveraged in design and delivery. We also consider the remaining challenges as our funding from the UKRI Enhancing Research Culture allocation ends in July 2025 and we move to a 'business as usual' model.

Keywords: writing; equity & inclusion

Introduction

Time to Write (T2W) has its roots in the Power Hour of Writing series (**Zihm & Reid-Mackie, 2021**) that we initiated following a review of the university's staff researcher development programme in the wake of the COVID-19 pandemic. We noticed both an increased pressure on academic writing time due to unbalanced workloads and lack of connection resulting from working from home. Rooted in collegiate, social approaches, the design of sessions and delivery provide opportunities for participants to develop positive writing habits and explore different methods of protecting time, as well as supporting the legitimisation of writing as part of the academic working day (**Murray & Newton, 2009; Sword, 2017; Zihm & Reid-Mackie, 2021**).

The Power Hour combines short, structured, and protected periods of writing time with opportunities for connection with the wider academic community. Any member of staff with academic writing tasks to complete (whether researcher, academic, technician or professional) is welcome to attend, and the community now numbers over 270. Each 90-minute session starts with 10 minutes of goal setting before we switch off our mics and cameras for an hour of concentrated writing time, followed by an informal discussion of both progress and setbacks at the end. Power Hour has become a valued space of friendly and non-judgemental connection, with a core of regulars who attend every week, and many more who drop in and out as needed throughout the year. Sessions require minimal facilitation and admin resource, and we work with a small group of volunteer hosts to provide three sessions a week at different times.

The Power Hour community quickly started to request further support in the form of organised writing retreats, and the UKRI Enhancing Research Culture fund provided an opportunity to both meet the immediate need for longer stretches of protected time and look beyond, supporting the wider growth of a positive, inclusive writing culture. We adapted Rowena Murray's structured approach to retreats and social writing spaces (**Murray & Newton, 2009; Murray, 2015**) to design retreat spaces that complement the ethos of our Power Hours, as well as reserving a significant portion of our funding to support colleagues across the university to run their own writing retreats. Our retreats run over one or two days, with a mixture of on and off campus venues. They are designed to flex around the needs of participants, whilst maintaining clear expectations of commitment. For example, retreats are always programmed during the working week and participants with caring responsibilities or accessibility needs are invited to discuss them with us to ensure they can attend comfortably. The design of the retreats support writer wellbeing, development of healthy writing habits, and a positive

relationship with writing, as well as providing time to write (**Murray, 2015; Murray & Newton, 2009; Sword, 2017**). The purposeful provision of different lengths of protected time, both online and in person, supports the differing needs among writing community (**Sword, 2017**).

The T2W project has been warmly received by participants. Feedback has shown that the project has created a sense of community, increased feelings of wellbeing and an improved ability to complete academic outputs. The regularity of the retreats has enabled participants to weave their writing through the year, with several reporting that they have completed writing projects solely using power hours and retreat time. The largest demographic of staff attending the writing retreats are mid-career women. These were the outcomes that we expected and planned for, reflecting wider findings in the literature about the ability of writing retreats to: support equity and inclusion to research, enhance belonging, and increase wellbeing (**Grant, 2006; Kent et al., 2017; Murray, 2015**). We also planned from the beginning to support wider activity through formal channels, contacting associate deans and heads of research to offer support with organising retreats at faculty and school level.

However, we had not foreseen the depth of benefit to women, particularly those with caring responsibilities and how this need would initiate independent replications of the project across the university, as female academics took our approach to protected time back to their departments. We also realised that our approach to facilitation and the skills involved in creating and communicating welcoming, inclusive spaces are major contributors to impact of T2W. Supporting this replicated, widened delivery became one of our priorities and has taken multiple forms, including coaching on design and facilitation skills, building a bank of shared information and resources to aid the organisation of retreats and other forms of protected time, hosting a 'meta retreat' to share skills and knowledge between facilitators, and finally, forming an ongoing community of practice to provide support and share learning.

Expected and Unexpected Benefits Around Wellbeing, Inclusion, and Equity

When designing the Time to Write project we were primarily aiming to provide protected time in the working week and support people to form healthy writing habits. Writing is an intrinsic part of academic life that is often a casualty of high workloads and conflicting priorities, particularly when balancing teaching and research (**Westoby et. al., 2021**). Providing protected time was expected to yield positive results in terms of productivity and a more positive outlook on both participants' relationship with writing and their work life in general.

The communal approach was specifically designed to offer an opportunity to form connections across the university. We expected the writing retreats to enhance participants wellbeing (**Eardley et. al., 2020**). We encouraged wellbeing practices in our two-day retreats, building in regular breaks, running them in locations with easy access to nature walks, and providing optional fitness facilities or yoga classes. The project has been welcomed by university staff not only for increasing their ability to create outputs but as an environment that helps support their wellbeing.

At first glance, T2W may seem relatively straightforward — simply providing time and space for writing within working hours. However, as facilitators, we discovered that this simplicity masks both the complexity of its impact and the skills and experience needed to deliver across the multiple outcomes we recognise through our theory of change. The project is not just about offering a quiet space to work and empowering people to block out space in their diaries to write. T2W addresses the deeper needs of participants who are often disadvantaged by traditional university systems. For many people, especially women with caring responsibilities, it is exceptionally hard to ring fence time to write; to put your own projects first and let pastoral care, domestic load and collaborating with colleagues go on to the back burner to focus on the papers and grants that are needed to progress your own career (**Babcock et al., 2022**).

The difficulty is compounded by the historical inequitable structures within academia. Although there have been great gains in gender equality in recent times, women academics still face a myriad of challenges moving through the pipeline (**Gill, 2009; Ivandic & Lassen, 2024; Westoby et al., 2021**). The workload expectations and the culture around productivity often do not account for the additional burdens that women and carers face, making it especially difficult for them to prioritise their own work (**Babcock et al., 2022**). The T2W programme is a step toward creating supportive structures so that all academics can thrive and is a way for institutions to acknowledge additional pressures that women, caregivers and underrepresented staff face.

Some senior staff and stakeholders, who may not share these life experiences, have struggled to fully appreciate the value of the project. While they may view the retreats as a useful ‘nice to have’ or luxury, they do not always recognize the essential role they play in supporting research excellence, especially for those who experience systemic barriers to career advancement. We are also aware that colleagues who have not attended the T2W retreats are likely unaware of our structured approach and the difference this can make to the outputs and outcomes of a retreat,

including immediate and ongoing productivity, relationship with writing, and overall wellbeing.

Participant response to the project has been overwhelmingly positive, with many members of our academic community relying on the project to complete tasks that would otherwise be set aside. However, we recognise that there is more we can do to support those with caring responsibilities. Colleagues who are single mothers, particularly those with no local support network, have found attending our residential retreats overnight is nearly impossible, due to the costs related to additional childcare.

Another unexpected outcome of the project has been the adoption and replication of protected time across different faculties within the university. T2W participants want their colleagues and students to benefit from this type of supported writing. Female participants setting up their own versions of protected time have also noticed that some of their male colleagues have a lack of understanding why these writing initiatives are useful, the uptake again being higher amongst female colleagues. This disparity highlights a broader issue within academia, where certain skills and forms of knowledge are undervalued, especially in terms of how institutional support structures can better foster these practices (**Montano, 2025**). The next section explores how these undervalued skills intersect with the need for stronger institutional support and the exchange of knowledge within academic environments

Recognising the Knowledge and Skills Behind the Design and Delivery

Our feedback and evaluation processes have shown that much of the added value generated by the T2W programme stems from our approach to the design and delivery of the events, the spaces we hold them in, and the communication surrounding them. Our experience in facilitating and managing events have also contributed to the creation of welcoming, inclusive and purposeful time and space for writing. We also bring our experience as researcher developers to the table, building support for values and behaviours such as wellbeing, self-awareness and motivation into the design of the events.

Increasing capacity to support protected time to write across the university is a key part of the T2W project, but supporting colleagues to organise and facilitate their own retreats and other protected time revealed that many lack some or all of the skills outlined above. These skillsets tend to be overlooked in an academic setting, where professional skills are often perceived to be of lesser value (**Freeman & Price, 2024; Macfarlane, 2011; Whitchurch, 2008**). Additionally, as evidenced by the evolution of the REF, the primary focus tends to be on the work at hand,

rather than the people doing it (**Gadd, 2024; Inglis et al., 2024**). Those who have gone on to organise local programmes have predominantly been core members of the T2W community and repeat attenders at retreats, which may have helped build skills and confidence alongside clear understanding of the benefits.

Feedback from events and ongoing evaluation demonstrate that participants place high value on feeling invited, understanding the purpose and parameters of the event, the sense of community generated at the event and beyond, and the embedded support for developing healthier writing habits. Participants also report feeling looked after and valued, by both the facilitators and the university, as well as being pleasantly surprised by the intangible benefits of taking part.

Widening Institutional Support and Understanding Remains a Challenge

Developing and delivering the T2W programme over the last three years connected us with a wide range of colleagues engaged in similar enterprises across the university. Realising that we were at the centre of a potential network, we organised a Meta Retreat in May 2024. This event created a retreat space for the core T2W community to connect with other colleagues who are independently providing protected time and other support for academic writing at all levels of experience. We focused on sharing our practice as facilitators, discussing and documenting the benefits of organised protected time, and thinking through how we could support each other in both our current activity and in establishing protected time for writing as an integral part of a healthy and inclusive academic culture.

We used Art of Hosting principles (**Art of Hosting, 2025; Corrigan, 2019**) and creative evaluation methods (**Christou et al., 2023**) to design a space for questioning, conversation, and creative, critical reflection on personal relationships with writing and the importance of organised time and space to practice it. Inviting senior leaders into the space alongside practitioners and facilitators resulted in a powerful, collaborative conversation and connections made on that day have evolved into a community of practice (CoP). We have collectively agreed on three initial foci: building a shared resource bank, supporting lead organisers to evaluate the impact of their work, and raising awareness of the strategic impact of protected time to write, particularly retreats.

Despite this groundswell of activity and enthusiasm, we are finding it difficult to confirm internal financial support for T2W beyond the end of our funded project. Our approach to evaluation has evolved with the complexity of the project, moving from simple feedback and impact

surveys to the development of a 'theory of change' (**Weiss, 1995**). In this final year of original funding, we are focusing our own evaluation activity on building the business case, gathering evidence to support the feedback that they have written more and better research outputs. Together with the feminist evaluation already completed, we hope to draw firmer connections between T2W's achievements and institutional strategic goals.

Conclusion

We have found that organising a programme of structured, protected time for writing is a simple, cost-effective way of supporting University of Southampton staff. Staff who come to the writing retreats are writing more papers and grant applications (as well as other types of writing) and of better quality than they would without this support. However, the benefits of the project are not limited to increased productivity. We have discussed in this article the important impacts related to equity, inclusion and staff wellbeing.

The T2W project has had the greatest impact on supporting women in the academy. This has made us, as researcher developers, reflect on the labour, hidden barriers and undervalued skills of being a woman in our sector (**Babcock et al., 2022; Mackenzie et al., 2022**). The design of the project has also been influenced by other women academics and research developers (**Murray, 2015; Zihm & Reid-Mackie, 2021**). The project has left us wondering if the intrinsic understanding from our own experiences in academia are part of the reason we built a programme that is so powerful for fellow female academics.

The project's design has welcomed feedback from participants, and we have developed a 'theory of change' (**Weiss, 1995**) to guide this iterative process and provide a framework for widening impacts of the project. The design is flexible to different needs and has always aimed to acknowledge that writing can be a difficult endeavour and impart the knowledge that writers can be supported by a community of peers. We also recognise the limits of T2W to be truly equitable without finding a way to support carers without support networks, such as single mothers and international researchers, to attend our residential retreats. With this aim in mind, we are reaching out to the University of Southampton Parent and Carers Network and trying to navigate university financial systems that have previously been a barrier to us providing this support.

T2W has demonstrated the power of modelling inclusive, equitable research culture. By using broad eligibility criteria and inviting participants to use the time for any kind of academic writing, not just research grants and papers, we recognised the complex reality of most mid-career

academics, as they balance teaching, research and leadership (**Gould, 2022; Pickard-Smith et al., 2023**). We also made a space for the wider research community – moving beyond the traditional research pipeline from postgraduate researchers to professors, and purposefully including technicians, librarians, research professionals, and other 'hidden roles' (**Hidden REF, 2025**).

Moving forward we hope to experiment with different types of protected time. We recognise that some of our attendees are using the time to create non-traditional outputs, and we would like to further support these endeavours. We will be developing an 'un-plugged' retreat and are looking at other types of collaborative protected time for inspiration, such as Rachael Clerke's *Work Party for Cheats* (**2024**), to understand how we can further support our staff to get all types of research-related work done

In many ways Time to Write has been an exercise in taking care and listening to colleagues. As we have evolved and evaluated the project, it has become clear that with the right skills and support, purposefully structured and protected time to write is relatively simple to organise and has huge impact on participants. We have made steps to achieve widened support for T2W from University leaders, and we hope that the community of practice we have initiated helps to build skills and capacity to provide that support, as well as increasing advocacy for ongoing protected time across the university.

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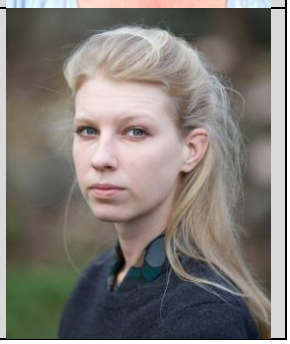
Dr Jess Macpherson is a teaching fellow in the Centre of Higher Education Practice with a specialism in designing and teaching Creative Evaluation methods for Research Culture initiatives. Jess has a practice-based PhD in Feminist Choreographic practices from Bath Spa University.



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Enhancing Inter-Cultural Awareness Among International Postgraduate Researchers and Their Research Supervisors at Warwick: A reflection from the project team

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Abstract

The increasing internationalisation of postgraduate research (PGR) education in the UK has highlighted the unique challenges faced by international students, who now make up around 40% of the postgraduate population. These students face a range of issues, including financial pressures, difficulties with cultural integration, language barriers, workload management, mental well-being, and mismatches in supervision expectations. There is often inadequate support and mentorship tailored to international PGRs, and supervisors may not be fully aware of the hidden barriers these students encounter. Intercultural dynamics is a significant challenge in fostering effective interactions between PGR students and their supervisors. Building intercultural awareness—knowledge, skills, and attitudes necessary for positive communication in a multicultural environment—is vital for creating strong relationships in this context.

This project, therefore, examined the role of intercultural awareness in shaping the relationships between PGR students and their supervisors at the University of Warwick. Using semi-structured interviews with PhD students and supervisors, we explored how intercultural competence affects communication, aligns expectations, and enhances the research experience. This reflection shares the research outcomes, along with insights from the project team on the challenges encountered during the study. Future work will be to expand this research on a larger scale within Warwick and across multiple UK institutions to deepen understanding and inform supportive frameworks for international PGRs.

Keywords: intercultural awareness; postgraduate researchers; research culture; international education; supervisor-student relationship

Introduction

The increasing internationalisation of postgraduate research (PGR) education in the UK has highlighted the unique challenges faced by international students, who now make up around 40% of the postgraduate population (**HESA, 2023**). These students face a range of issues, including financial pressures, difficulties with cultural integration, language barriers, workload management, mental well-being, and mismatches in supervision expectations (**Briscoe & Mattocks, 2016, Riches-Suman & Delderfield, 2021**). One of the most critical relationships in a PGR's research journey is the one they develop with their supervisor (**Manathunga, 2017**). In an increasingly globalised academic landscape, it may mean that the PGRs and their supervisors have diverse cultural contexts, which may mean different learning approaches, varied communication styles and a difference in expectations from each other.

Intercultural awareness plays an important role in creating inclusive and effective research environments (**Zheng et al., 2019**). The relevance of intercultural awareness in research culture cannot be overstated as in many cases international PGRs often encounter difficulties related to access, retention, and integration into research communities. These challenges may stem from linguistic barriers, differing academic expectations, and cultural nuances in communication and collaboration. Supervisors, in turn, may face difficulties in understanding and adapting to the diverse needs of their international students, impacting the quality of the research experience. Bridging this gap is essential for creating a more inclusive research culture that values diversity as an asset rather than a barrier (**Manathunga, 2017**).

This paper reflects on the experiences and insights gained by a project team who examined the role of intercultural awareness in shaping the relationship between PGRs and PGR research supervisors at a Russel group University. It is understood that student-supervisor relationship is not the only factor in defining the student journey, however, many studies have highlighted that this relationship does take a centre stage in shaping a PGR's journey (**Khuram et al., 2023**). The role of culture in this supervisory relationship is explored from multiple aspects such as language, non-verbal communication, understanding of culture and expectations as highlighted in the literature as key factors in ensuring an inclusive student – supervisor relationship. This reflection also draws on the experiences of the project team in conducting this work. The team is a combination of

academics and PhD students who work as graduate teaching assistants (GTAs) where GTAs bring a unique perspective both as learners and facilitators within this cultural exchange. By reflecting on their experiences, the project team sheds light on the practical strategies and challenges of fostering intercultural awareness.

Research Design

This study adopts a qualitative research design and a phenomenological approach to explore the intercultural challenges faced by international PGRs and their supervisors. Qualitative research is well-suited for capturing socially constructed realities and complex interpersonal dynamics, making it particularly relevant for examining supervisory relationships (**Creswell, 2007**). The phenomenological approach was chosen to gain deeper insights into participants' lived experiences, focusing on how cultural differences shape supervisory interactions. Qualitative research typically involves collecting substantial amounts of data, which are systematically analysed and condensed (**Miles & Huberman, 1994**). In this study, data was gathered through semi-structured interviews conducted with international PGRs and their supervisors across faculties at a Russel group University. Semi-structured interviews were chosen for their flexibility, enabling the interviewer to explore topics in depth while ensuring that key areas of interest were consistently addressed (**Braun & Clarke, 2021; Rubin & Rubin, 2011; Kidman et al., 2017**).

Participants were recruited using a purposive sampling strategy to ensure the recruitment of participants with relevant experiences (**Ritchie & Lewis, 2003**). Two distinct participant groups were targeted, i.e., PhD supervisors with experience supervising international PGRs and international PGRs at different stages of their doctoral journey. The recruitment process was conducted via university-wide newsletters, departmental emails, and online institutional platforms, ensuring representation across all faculties. A heterogeneous sampling approach was adopted, including participants of diverse cultural backgrounds without restrictions on age, gender, or ethnicity (**Ibid**).

Data collection and analysis

Interviews were conducted between July and August 2024. Nine semi-structured interviews were carried out with international PGRs and PhD supervisors via Microsoft Teams, with each session lasting approximately 45–60 minutes. To explore the experiences and perspectives of both international PGRs and supervisors, a pre-designed interview guide was used to structure the conversations, focusing on topics such as cultural challenges, communication strategies, and institutional support

mechanisms. The key themes for interview are listed in Appendix. The interviewer employed verbal and non-verbal cues to establish rapport, as recommended by Lindlof and Taylor (**2002**). Follow-up questions were used to elicit detailed and contextually grounded responses, ensuring participants' accounts were thoroughly understood.

Interviews were recorded with participants' consent and subsequently transcribed verbatim. A thematic analysis approach was used to identify and explore key themes within the data. The analysis process involved selecting illustrative excerpts from transcripts to substantiate findings and provide evidence for interpretive claims (**Braun & Clarke, 2021; Lindlof & Taylor, 2002**).

Limitations

This study provides valuable insights into the intercultural dynamics between international PGRs and their supervisors, however, there were some limitations to data collection and analysis. Firstly, the relatively small sample size and the focus on a single institution limit the generalizability of the findings to broader contexts (**Creswell, 2007**). Additionally, the voluntary nature of participation may have introduced self-selection bias, as those with a greater interest in intercultural issues were more likely to engage, potentially skewing the data (**Miles & Huberman, 1994**). Moreover, the use of remote interviews via Microsoft Teams, while practical, posed technological and environmental challenges that may have constrained the depth of engagement and limited access to non-verbal communication cues (**Lindlof & Taylor, 2002**). Finally, while the study focused on intercultural awareness, it did not address other potentially significant variables, such as institutional structures or disciplinary differences, that may influence supervisory relationships.

Findings and Discussion

It is widely recognised that intercultural awareness can significantly influence the relationship between PGRs and their supervisors, often presenting challenges. An analysis of the findings revealed that one of the most frequently identified challenges was the understanding of roles and expectations in supervision. A major challenge between PGRs) and their supervisors arises from a lack of clear understanding of roles and expectations in supervision. Supervisors often assume that PGRs possess significant experience in literature searching, critical analysis, and research skills, which can lead to mismatched expectations and difficulties (**Ryan, 2005**). For example, one PhD supervisor noted that PGRs:

> *Don't have a clear understanding or expectation for what they need or supposed to deliver during seminars, workshops, and supervising meetings.* (**PhD Supervisor 1 comment**)

While on a similar theme, the experience of the students was much different as they identified:

> *They won't tell me their expectation like something I need to do it. So I think at my PhD journey in my first year, I have wasted some time on it because I only could suggest what I needed it to do.* (**PGR A comment**)

Most PGRs and supervisors have noted that language barriers can significantly hinder communication. These barriers can lead to misunderstandings, confusion, and challenges in interacting with native speakers, understanding feedback, participating in class, and completing tasks which is in line with what has been identified in literature (**Alebaikan et al., 2020; Gao, 2021**). As one supervisor highlighted:

> *Sometimes the challenge is basically just the language barrier, the student come here (university in the UK), they pass IELTS or whatever exam test. Passing that test doesn't mean that they are necessarily good enough for communication, when they first come to this country, sometimes they don't understand the way that you speak. So, if there is one challenge, in my opinion, there could be a language barrier* (**PhD Supervisor 2 comment**)

And a PGR also indicated:

> *Generally, the language barrier and been understanding and tolerant, sometimes within the language barrier and difficulties related to that.* (**PGR B comment**)

More attention on active communication skills and opportunities for PGRs to practice their skills is essential and can prove to be beneficial.

Feedback came up as another concern that may potentially be a cause of misunderstanding between international PGRs and their supervisors. As Alebaikan et al., (**2020**) highlighted that students may have varying interpretations of feedback that they receive from their supervisors. An ideal solution is to agree on a format of feedback that is workable for both. Establishing clear and mutually agreed upon expectations for feedback is crucial for effectively supporting students (**Ibid**). From the interviews, it also appears that the lack of knowledge about the cultural backgrounds and experiences of international doctoral students can lead to assumptions and misunderstandings about their perspectives and needs (**Humphreys et al., 2021**). PGRs students also noted:

> *Different cultures we have different boundaries between the supervisees and the supervisors. So that is one thing at the early stage we should like have more direct and transparent discussion between each other.* (**PGR C comment**).

> *Stress or anxiety, and then I maybe realise that it's because the relationship between me and my supervisor or the research team. To realise there is a culture difference and communication, it's talking with the other team.* (**PGR A comment**)

The need for clear communication, mutual understanding, and flexibility in communication is essential to overcome in these challenges. A positive outcome of this research is the willingness of both international PGRs and the supervisors to engage in more meaningful institutional support and training focused on enhancing intercultural awareness. There already exist intercultural awareness workshops at the University, however, it appears that most of the participants find these to be more generic and not suitable in their context. This shows a need for updating the training resources and possibly try solutions where there is more opportunity for people to apply and test their skills rather than only receive theoretical information. Some of the suggested solution as highlighted by participants:

> *Workshops for international PGRs to share their experiences, I know PhD is not only about supervision, but there are a lot of other things that come in. So, if they can have workshops to share experiences, and maybe trying to share possible solutions it would be beneficial.* (**PGR D comment**)

> *There needs to be other supporting structures in the university to come in and support.* (**PhD Supervisor 2 comment**)

Research findings indicate to address all of these issues it is essential for both international doctoral students and their supervisors to develop cultural and intercultural awareness. Cultural awareness involves understanding the role of culture and cultural norms in language learning and communication (**Baker, 2011; Bryam, 1997**). It also requires recognising and adapting to cultural differences and developing essential skills and communication styles to interact with a diverse culture (**Baker, 2011, Manathunga, 2017**). Such active participation in these activities will improve research culture at the University.

Reflections from the Team

As the team that came together to contribute to this project, constituted of academics and PhD students (who also work as GTAs) graduate teaching assistants it is quite important to understand their motivations for contributing to this project and how this project improved their learning and practice in staff-student relationship.

Project lead

My decision to initiate this research project stemmed from my own experiences as an international PhD student in the UK many years ago and also from my experience of working with PhD students supporting on my teaching module as GTAs. Navigating a new academic and cultural environment presented both challenges and opportunities for personal and professional growth. I often found that while academic expectations were clear, cultural nuances in communication, supervision styles, and expectations were less understood. This gap in awareness sometimes led to misunderstandings and inefficiencies in the supervisory relationship.

Now as an academic, I also recognise the increasing diversity in higher education and the critical role of intercultural competence in fostering a supportive learning environment. My expectation from the projects was to evidence the importance of intercultural awareness which may not be a visible barrier but as research also indicates it does impact the relationship consequently impacting the research culture overall. Through this project findings, we as a team gained insight into common challenges, such as differences in communication styles, feedback expectations, and academic autonomy. Equally, I also consider it as an opportunity where I discovered best practices where supervisors and students successfully navigated cultural differences through openness, adaptability, and active engagement.

One key lesson from this project was the importance of structured intercultural training for both students and supervisors. While many institutions acknowledge diversity, formal mechanisms to equip individuals with intercultural skills are often lacking. Additionally, fostering an open dialogue about cultural expectations can significantly enhance the PhD experience for international students and create a more inclusive academic environment.

This project reinforced my belief that intercultural awareness is not just an added skill but an essential component of academic collaboration. Moving forward, I hope to advocate for more structured support systems that promote cultural understanding, ensuring that PhD students and supervisors alike can thrive in an increasingly globalised academic world.

PhD student/GTA

When Postgraduate International students decide to study in a different country, it is crucial for their PhD supervisors to understand their cultural and sociocultural norms. This understanding can help in building a better relationship between the students and their supervisors, which mainly influenced my decision to participate in this research project and develop a knowledge of how to build a better relationship with my PhD supervisors.

Understanding a different culture can be challenging, and a lack of knowledge about the backgrounds and experiences of international doctoral students can lead to assumptions and misunderstandings regarding their perspectives and needs (**Humphreys et al., 2021**). I often feel that this is one of the biggest challenges between me and my PhD supervisors. Conversations with other international PGRs and their supervisors have also highlighted this point.

Another significant challenge that I have observed between PGRs and their supervisors arise from a lack of clear understanding of roles and expectations in supervision. Supervisors often assume that PGRs have substantial experience in literature searching, critical analysis, and research skills, which can lead to mismatched expectations and difficulties (**Ryan, 2005**). When I started my PhD, I was not fully aware of how to prepare for my monthly supervision sessions or what areas I needed support from my supervisors. This lack of preparation led to struggles in progressing with my PhD. Also, as a part-time PhD student, balancing my studies with other commitments made it even harder to meet my supervisor's expectations and progress with my research. Discussions with fellow PhD students confirm that we all face similar issues, which is a significant concern for all of us.

To address these challenges, it would be beneficial to organise workshops where international PGRs and PhD supervisors can openly share their experiences and collaboratively develop solutions. It would also be beneficial for PhD students to have the opportunity to work on different research projects. This experience would allow them to gain real-life skills in collaborating on research, collecting data, and analysing results.

Recent PhD graduate

Gee (**2001**) posited that identity formation is shaped both by self-perception and by how others ascribe it. As a recent PhD graduate, my doctoral journey was shaped by my supervisor’s professional beliefs and expectations, requiring me to navigate diverse professional and personal perspectives. The cultural, academic, and interpersonal challenges I encountered deepened my understanding of the complexities faced by international students. I recognised that regardless how well a doctoral student gets along with a supervisor, there are certain goals, standards and perspectives inherent to the doctoral process are not always shared. This realisation motivated me to contribute to this project, which aims to enhance intercultural awareness among supervisors. The project underscored the importance of understanding and addressing the unique experiences of international students, while highlighting the critical role of culturally sensitive supervisory practices. It provided an opportunity to reflect on my own nuanced challenges as a doctoral student while

supporting the creation of more inclusive and supportive environments for international PGRs in the UK. Engaging with this study not only refined my research and reflective skills but also deepened my commitment to fostering an equitable and empathetic research culture.

Conclusion and Future Work

This project underscores the crucial role of intercultural awareness in fostering effective and inclusive PhD supervision. By addressing communication barriers, mismatched expectations, and cultural differences, both students and supervisors can build stronger, more supportive relationships that enhance the overall research experience. While this study highlights key challenges and best practices, future work should focus on improving the current provision of intercultural awareness programmes, creating peer-support networks, and implementing workshops where international students and supervisors can openly discuss expectations and strategies for collaboration. Expanding this research within the University and across multiple institutions will further refine best practices and contribute to a more inclusive and globally aware academic environment.

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Dr Asima Iqbal is working as Assistant Professor at WMG, University of Warwick, delivering an interdisciplinary skills and research methods module to over 1,000 students both at UG and PG level. She is a Senior Fellow of Higher Education Academy (SFHEA) and as an academic and a practitioner, she organises and carries out capacity building programmes/workshops for students and fellow colleagues. She has a longstanding experience in enabling students and early career researchers to develop study and transferable skills to support their academic and professional development. Her role encompasses scholarly research work and outreach activities underpinned by the value of collaboration, teamwork, support and networking within and across teams in and outside University of Warwick.	

Appendix

Table 1: Interview Themes and Guiding Questions for Supervisors.

Background Information:
What is your area of research?
How much experience do you have in terms of supervising students from different cultural backgrounds?
Intercultural Awareness
As you know, this project aims to enhance intercultural awareness among international students and their supervisors. How would you define intercultural awareness in the context of your own supervision experience?
What is important to know about different cultural backgrounds when supervising international students?
Tell us about your strengths are as a supervisor?
How might enhanced intercultural awareness impact your communication with your supervisees?
Improvement and Opportunities
Please provide an example of a situation where you used your intercultural awareness to enhance your supervision of international PGRs
How has your intercultural awareness affected the student-supervisor relationship?
What are some common challenges that arise when interacting with international students from diverse cultural backgrounds? What challenges do you think still exist in supervising international PGRs due to differences in culture?
Are you aware of any training programs at Warwick or other higher education institutions (HEIs) that focus on intercultural awareness? How have your experiences with these training programs impacted your role as a supervisor?
Do you have any additional comments or suggestions related to enhancing the supervision of international PGRs at Warwick?

Table 2: Interview themes and guiding questions for International PhD students.

Background Information:
Can you tell me a bit about your research area and how you chose this field of study?
What is your overall experience as an international (minority) postgraduate researcher at Warwick?
Intercultural Awareness:
As you know, this project aims to enhance intercultural awareness among international students and their supervisors. From your experience, how do you define intercultural awareness?
In your opinion as an international student, what key aspects of different cultural backgrounds should supervisors and the university be aware of?

Improvement and Opportunities:
Please provide an example of a situation where intercultural awareness proved beneficial to your PhD Please describe the situation and explain how intercultural awareness made a difference.
How do you think cultural backgrounds affect the frequency and ease of communication between postgraduate researchers (PGRs) and their supervisors? OR In some situations, differing cultural backgrounds may make communication difficult/less frequent between PGRs and their supervisors, are you aware of any such scenarios?
Based on your experience, what specific support do you think the university should provide for international PhD students?
Do you have any additional comments or suggestions related to enhancing the relationship between supervisors and international PGRs at Warwick?

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Employability Schemes for Young People in STEM: Reflections on research culture and cross-faculty collaboration

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Abstract

Following the success of Employability Schemes for Young People in STEM: Enabling staff to deliver an enriching experience through research culture development, the next stage was to share good practice with more departments within the University of Warwick. This included sharing information through a faculty wide working group, recruiting staff from two new departments to create a cross-faculty work experience programme and supporting staff from other departments that wanted to host their own programme, but are new to the process. Overall, the aim was to demonstrate and enable engagement with young people, creating role models and encouragement for them to pursue a future in STEM.

This article includes a collection of reflections from the staff engaged in the process, highlighting how the initiatives have changed their view on employability schemes, enhanced their working environment and provided training and development that will open further opportunities for them in the future. As the team has grown and we go into the project's third year of deployment, new staff are foreseeing the possibilities and benefits of the project and have provided statements for their goals and objectives prior to beginning the program.

Through discussions with other groups, it is clear that employability schemes can come in many shapes and sizes, so a comparison between the traditions and project style of delivery has been presented.

Keywords: work experience; research culture; team creation; good practice

Research Culture Aims

Often referred through the Royal Society (**2025**) definition, Research Culture encompasses 'behaviours, attitudes, values and norms that encourage open, collaborative science involving a diverse workforce'. As this has been translated and adopted into academic institutions (**Edinburgh, 2025; Leeds, 2025; Oxford 2025; Warwick 2025**), we frequently see the themes of 1. *Career Paths, Personal Development and Training, 2. Research Practice, Responsible Research and Research Support, 3. Open Research, Governance and Data, 4. Equality, Diversity and Inclusion*. The research culture project, discussed and explored in this article, *Addressing social mobility issues in STEM*, (**Carnegie & Ogunkola, 2024; Carnegie et al., 2024**) was created to target the following three themes:

1. Personal Development and Training for Leadership
2. Equality, Diversity and Inclusion through Access to Higher Education
3. Open research and Sharing Knowledge via Good Practice.

The team have moved into their final year of funding through the Enhancing Research Culture Fund through Research England and are continuing to take the outcomes and conversation to a national and international audience. The project has created employability initiatives for young people between the ages of 16 and 18 from low socio-economic backgrounds, looking to increase their future opportunities with a work experience hosted at the University of Warwick. A large part of this year's project development was the focus on creating good practice and the dissemination of said practice through relevant networks, both locally and internationally.

A report, commissioned by UKRI, evaluated research culture initiatives, resulting in several recommendations for implementing culture change (**Shift Insight, 2024**). They reviewed the outcomes of 421 research initiatives, predominantly focussed on supporting Early-Stage Career researchers. Of the 421 projects, just 5 (1%) were focussed on improving opportunities for people from low socio-economic backgrounds', and 3

(<1%) focussed on improving relationships and opportunities within their local communities. Showing there is a continued gap within this space that needs to be highlighted.

Team Growth and Good Practice

Published in 2021, the UK Department for Business, Energy & Industrial Strategy (**2021**) created the *R&D People and Culture Strategy*. A proposed output of the strategy was the development of a 'Good Practice Exchange' (GPE). This was delegated to and expanded upon in the UKRI Research Culture Initiative Report 2024, in which it states that the 'goal of the Good Practice Exchange is to harness and consolidate existing activities relevant to research culture for the benefit of researchers, research itself, and society'. The activities highlighted some key considerations that the committee must focus on when creating the GPE, which resonated very well in reflection of the Work Experience project we have undertaken. They include

1. Take a leadership role and have a compelling vision.
2. Be inclusive, including within leadership.
3. Be action based and be seen to facilitate actual change, translating practice into policy.
4. Champion and amplify existing work.
5. Be agile and flexible, develop mechanisms to evaluate and review.
6. Reach across the research ecosystem in sharing practice.
7. Foster a place for openness and transparency.
8. Further a common understanding of research culture.

Another year of project has seen the WMG Work Experience team change and grow. One member of the team left the department, others have new commitments through job role changes, but fortunately the project and funding has allowed us to create new roles for members of staff from all levels of employment. It has been a huge priority for this project to develop and enhance the opportunities for the members of staff that have participated.

Work Experience Delivery

The work experience model that is predominantly discussed in this article involves a small cohort of two to four students, that incorporates an overarching STEM theme, met through a series of tours, lectures, practical work and independent learning. This week culminates in a group presentation to the staff, enhancing addition skills such as presentation

and communication. Alternative models are available and will be discussed in the Work Experience Models section.

The following sections provide reflective writing from those that have been or are about to be a part of the WMG Work Experience team.

Continuing support: Asima Iqbal (WMG, Teaching, 2023)

I started working with the work experience team in 2023 following my longstanding engagement with widening participation activities outside the University of Warwick as I believe that all students, regardless of their background, should have access to the resources and experiences that can shape their future. My first assignment was volunteering as a Business Host in the *Beyond Your Limits* (BYL) programme conducted by the EY Foundation, to support three A level students on a work placement. I arranged a Library visit for the students and provided them with an opportunity to attend a national level academic conference, EERN hosted by WMG. The aim of facilitating students to participate in such educational activities was to raise awareness of STEM career paths. Reflecting on this work experience opportunity, it became obvious that while the students gained valuable insights into academic life at a university, they felt challenged to participate fully in the activities owing to language barriers. Two out of the three students had recently migrated from another country and were particularly struggling to integrate in their schools owing to cultural, educational and linguistic differences. This raises questions about the success and effectiveness of work experience opportunities for students coming from diverse backgrounds and the extent to which they feel included in an environment where they can thrive and succeed. Therefore, I feel that the work experience opportunities should also consider the unique challenges faced by migrants, some of them refugees, and tailor the activities to ignite their passion, boost their confidence, and open doors to future possibilities.

I collaborated with research colleagues to lead the Nuffield Research Placement for four A level students to do a project on ‘How can ChatGPT be used to develop professional skills in STEM students?’. This project aimed to deliver societal benefits by providing young adults in schools an opportunity to apply the skills and knowledge learned at school to work with researchers and academics while enhancing their UCAS applications and expanding their career prospects. While the Research Culture project allowed me to contribute to the widening participation strategy of WMG, working with the Work Experience team boosted my own career and professional growth as I had the opportunity to have two sessions in each running with an experienced professional development consultant to discuss my leadership and professional growth trajectory in the department. I found these sessions useful as I was able to achieve key

milestones in my existing role while furthering my career in educational outreach. Therefore, aligned with the spirit of promoting and nurturing a research culture within the department, participants of the project should continue to be provided such consultancy opportunities.

Effective Mentorship: Anupriya Haridas (WMG, Research, 2024)

My involvement in the Research Culture Work Experience program organised at WMG over the past 12 months was completely voluntary and deep rooted in my interest to provide support and empowerment to the younger generation of students to pursue a career in STEM. As somebody who has immensely benefitted from the effective mentorship and encouragement at the right phases of my career, I am delighted to be part of this work experience program to give back, providing insights about my research work and activities on battery materials and battery manufacturing/testing at the Energy Innovation Centre (EIC) at WMG. Being in academia, I personally enjoy interacting with students and explaining about cutting edge research concepts in simpler terms. I consider it as a privilege, as it allows me to instil curiosity, make complex research concepts accessible, and help shape the next generation of scientists. At the same time, I also recognise it as a responsibility, as students often look up to their mentors for clarity, academic depth, and encouragement, which calls for a fine balance of knowledge, empathy, and inclusivity.

The work experience program, in association with the EY Foundation and Nuffield Placements has enabled me to interact with different student cohorts in 2024 via both presentations and lab tours of EIC, sharing my interdisciplinary career journey to empower and inspire the young minds to pursue a career in STEM. I was particularly delighted to learn from feedback that one of the students explicitly expressed their wish to be someone like me working in the field of batteries after presenting my career journey.

Additionally, as part of the programme, there was one-to-one developmental support offered, in which I enrolled casually. However, it supported me inevitably while navigating a sudden challenge in my career and turned out to be an invaluable experience. Facilitating the personal as well as professional growth opportunities of the facilitators/mentors is an often-overlooked aspect as they put their focus into supporting the growth of the younger generation of scientists/engineers. I strongly believe initiatives like this are a step change as they go beyond traditional mentoring models that focus solely on students or early-career researchers. By also investing in the development of mentors, a two-way

growth dynamic is facilitated by which the mentors become more effective, empathetic, and resilient, while the mentees benefit from enriched guidance from mentors who lead by example. This shift inevitably acknowledges that mentoring is not a one-directional process but a reciprocal relationship that strengthens the academic ecosystem. By supporting mentors as well as students, such initiatives foster a more sustainable and impactful culture of research training in the long-term.

In the coming years, I would like to see the programme flourish in scope and reach, spanning across various universities in the UK as well as key industries providing the young students hands-on experience and technical insights that can brighten their career prospects.

Mentoring Through Sustainability: Maryam Masood (WMG, Teaching, 2024)

I got formally involved in the Research Culture Work Experience program organised at WMG in 2024. My interest in the program stemmed from my role as an academic at WMG and my desire to be a role model for the younger generation interested in a STEM career. Over the last year, I engaged with young students through the work experience program and learnt more about their career goals and interests. I took this opportunity to organise a session on sustainability. I set up a one-to-two-hour activity-based session for students, where I introduced them to key concepts about sustainability. I then invited them to apply these concepts to an area of their interest and present it to the team. I found the experience to be thoroughly fulfilling and enjoyable. I tried to simplify key concepts to show students how they align with my research and how these concepts could be applied. Working with younger students has been meaningful for improving my pedagogical approaches and understanding the perspectives of students from different backgrounds. The students were generally interested in learning how sustainability concepts applied to their areas of interest. One memorable moment was seeing students enthusiastically research and present creative ideas during the activity session, which showed their curiosity and engagement with the topic.

This program allowed me to pass on my knowledge and curiosity about sustainability to students while improving my approach to teaching and mentoring. It gave me the opportunity to reflect on how I can adapt my teaching and mentorship to different audiences. It also strengthened my skills in simplifying complex concepts, which is valuable for my academic role and outreach efforts. Another meaningful learning from this experience was the opportunity to receive developmental coaching. The coaching helped me to better align my work with my long-term career goals and in my leadership skill development.

In the future, I would like to see this program develop further and reach different universities. This is an exceptional experience both for young students and academics as they gain insight into future work and future of learning and should be further expanded. Within the program I would like to develop more hands-on activities for sustainability to further engage students in a practical and interactive manner. Activities such as building small sustainable systems, working with renewable energy models, or applying sustainability concepts to real-world challenges could greatly enhance the learning experience.

Practical Engineering: Bethany Haynes (WMG, Technical Services, 2024)

I believe that practical work experience provides skills and abilities to young people that they would not otherwise gain from school. Having the opportunity to operate and interact with laboratory equipment can provide them with the confidence to follow a new career path that may have otherwise been too intimidating. My own work experiences were fantastic and confirmed that making things with my hands is what I do best, I'm passionate about passing this onto to those who may need a little extra guidance.

Being able to connect with students who aren't academically minded, struggle to focus on individual tasks and who may not have the support they need at home or school is very important. Sometimes these students get forgotten about in the system, ending up in trouble as they keep themselves distracted, but these same students often excel in practical environments and find that when their hands are busy with tools, their minds calm down.

The one-to-one personal development and group training sessions I've had from the research culture project has been great. This includes learning new techniques on presentation skills and communication which I then transferred into my work experience delivery. I never felt pressured, and I was able to dictate what practical work the students would be doing, allowing me to create a small program of work that could be a one-off, hour-long session or multiple sessions. I was able to ensure that the students were able to carry out the practical tasks themselves, as I oversaw the session and guide them.

I'd love to see this project progress with more students having the opportunity to experience the university campus and see that not everyone who has a good job and successful career started off with the best grades in school or went to university themselves.

Cross-Faculty Collaboration: Helena Verrill (Mathematics, Teaching, 2024)

I have been the mathematics departments Widening Participation (WP) lead since 2023. The mathematics department has not previously hosted a work experience program, and certainly nothing so targeted on WP students. The statistics department has run a work experience program for girls from a local grammar school since 2023. I was interested in setting up a work experience in the maths department, so when I was introduced to this initiative it was the perfect opportunity to set something up.

So far, we have had three groups of WP students come to maths via the program. I've also attended workshops about how to set up a schedule of activities for work experience students.

Since I joined a program spanning WMG, physics and maths, it has made our involvement much less daunting. Having a team working on providing work experience has been an easy way for several members of the maths department to get involved with talking to visiting students from disadvantaged backgrounds. In the future, I am hoping we can use the same model for a work experience across mathematics, statistics and computer science. Now that I am aware of channels such as the EY Foundation, we are better able to work with partners to increase participation in maths.

I've been struck by the fact that work experience is valuable even for students who don't know what they might study at university. Just getting such students to campus is positive; perhaps a first stop on the route to becoming a researcher in some field. Work experience gives different insights than just sitting in a classroom observing a talk. WP students may have a lower level of mathematics background, because they will be more likely to attend schools which do not offer further maths, or which have larger class sizes, meaning teachers are not able to give extra attention to capable students, who would be able to go beyond the basics. WP schools are often less able to provide extracurricular activities and are more likely to have non maths graduates teaching mathematics. One-to-one conversations are useful for gauging the level of delivery of material, to be encouraging rather than off putting. We want to show WP students that universities don't have to be elitist institutions. Work experience reaches fewer student per hour per teacher, given its small group basis, in comparison to our year 12 events where we invite 60 to 100 students to attend lectures, encouraging them to apply to Warwick. In this sense it's time-consuming to arrange on a per student basis. Spreading the work over several departments makes it possible to fit in work experience around very busy academic schedules.

The research culture project has been useful for networking, especially attending the research culture conference at Warwick, and discussing research culture in an interdisciplinary environment.

Project Based Delivery: Mona Faraji Niri (WMG, Academic, 2025)

I believe that being able to show that 'what you do as a researcher can change something for the next generation' is a part of being an academic. I truly enjoy working with young people and showing them what they can achieve with STEM.

I have been supporting students with an experimental robotic platform to programme a microcontroller for specific tasks. Renewable energy production is a critical requirement for clean energy and a NetZero future. The setup was designed to give the students an experience of programming and coding in software for controlling the robotic arms for photovoltaic panels to maximise sun exposure. They were introduced to the tasks a programming and robotics engineer deals with daily.

The experience changed my view of outreach activity as I realised how a well-defined, and guided practice can increase the engagement of teenagers in a heavily technical session. As I have not been educated in this system as a non-UK resident in my early days, these insights were very helpful in identifying the students' expectations and coming up with a best practice strategy to engage with them. The students were clearly impressed with what can be achieved with strong programming and software skills as engineers, and the look on their parents' faces watching them proudly presenting their work stuck in my mind.

This activity together with other similar ones made my case strong when I applied for a promotion to Associate Professor. I also benefited from the one-to-one coaching sessions offered by this program for my leadership and management skill development.

What I love to see next is a more focused programme to empower women and less-represented individuals for STEM careers. It's disheartening to see how young female feel that engineering and STEM isn't for them or that they lack the confidence to take charge. This is something I am passionate about changing.

Industry Experience: Sarah Wilson (WMG, Research Support, 2025)

I am very pleased to be involved in the Employability Schemes Research Culture project. From a personal perspective, I benefitted from undertaking a period of work experience at an engineering test house in

my own school days, as until then all my knowledge of this STEM subject was derived almost exclusively from my parents, with very little content in my primary or secondary school curriculum. I was able to undertake placements in a variety of departments, with the ability to be hands on (health and safety permitting) for this very practical subject, which helped to shape my subsequent career. I chose to pursue a mathematics degree and then ventured into the world of electrical engineering where I eventually became the Chief Engineer for an area of East Midlands electricity distribution network.

From the other side of the fence, I have also spent some time as a secondary school maths teacher and am only too aware of the constraints on time and resources that our schools face when attempting to support young people towards employment. Whilst the utopia is to deliver enthralling lessons with clear links to practical application in the real world, igniting a passion and curiosity in learners, this is hard to achieve every time and certainly most schools do not have access to sufficient equipment, knowhow or the environment to be able to provide a full picture of the possibilities after secondary school.

This work experience scheme aims to give not just exposure to the world of work but also hands on experience, tasking participants with their own activities for which they are responsible for the completion, with adequate support from the excellent group of co-authors herewith. Skills development is not just on the students' side: colleagues have developed communication skills which they can further utilise for outreach, public engagement and scientific dissemination; team working skills to provide a cohesive programme to our student cohort; working under pressure and the ability to adapt to last minute changes; and greater empathy for the situations and lived experience of some members of our society.

In short, I am delighted to be taking part in the next iteration of the project to support both the young people with an interest in a STEM career, and also the personal and career development of my enthusiastic and generous colleagues.

Work Experience Models: Phil Jemmett (WMG, Outreach, 2025)

WMG Outreach have a portfolio of activities designed to enrich the education journey for young people and inspire them to study STEM subjects at Higher Education and enter the engineering workforce. The ethos behind our portfolio is to find gaps in provision for particular groups of people and design projects that support young people through difficult transitions and preserve their interest in the subject.

One such provision gap has been identified in work experience. Universities have a unique position in that they are education institutes and therefore represent familiarity for school pupils, as well as the next step on their journey, while also being places of work. The Gatsby benchmarks, against which schools are measured, require students to have an experience of Higher Education and workplaces, making a placement at a university twice as useful to schools.

Many staff within the university offer work experience placements when asked, but this is often arranged through their own personal networks. The gap is for young people who do not have a family member in the university already: without the professional network in highly skilled professions, young people from areas of deprivation or low socio-economic status simply do not have access to work experience placements. Placements should be awarded to the students who need them most to ensure that the groups who are currently under-represented get experience.

The WMG Work Experience week, which follows a different delivery model to what might be considered the conventional work experience placement, has been designed in partnership with the University's Widening Participation team. It recruits exclusively young people who meet benchmarks of deprivation such as experience of care, being young carers, being in receipt of free school meals, and so on. The week revolves around the young people working in teams to design a product and, with our engineers as mentors throughout the week, create a prototype to display at a final showcase session on the last day.

Taking a project-based approach where the placement students work in the same team throughout the whole week allows them to develop skills and reflect on their own progress. Rather than having a 'scattergun' approach where they see lots of different working environments but never feel that they have gained any insight into them, our approach dives deeply into one particular topic. All the groups work in the same large room, so they have an opportunity to mix with each other and see the different projects. The teams are also encouraged to decide what roles they need within their group – who will handle the pitching of the new product? Who will design this component, or build, or test that new feature? Throughout the week, they do still see a variety of working styles and environments, while also gaining confidence and mastery in the skills they are using.

WMG Outreach are keen to see this model shared and explored in other subjects and contexts. For example, the University has expanded from one stream of engineering to also having a creative arts strand, and our team have been supportive of this move. The WMG Outreach team run the engineering stream, handling all the content, activity design, timetabling,

logistics and delivery, while the university's Widening Participation team are concerned with pastoral support, safeguarding, and liaison with schools and families. The partnership is of mutual benefit to both teams, allowing us to focus on our respective strengths.

The Addressing Social Mobility Issues in STEM project could help us to share the model with other universities and later, with industry, to increase the provision of high-quality work experience placements to people from backgrounds currently under-represented in STEM. Every student needs to have an experience, and every employer has something different to offer. The range of models explored in this project provide options that will work for different students and different placement hosts.

Observations and Reflections: Craig Carnegie (WMG, Academic, 2023)

Work Experience often puts caution into those that are new to it, with the common query of 'do I have the time and resource to delivery such a program?', especially when the expectation is to host a full working week. Having now created and implemented a well-established experience, we have the flexibility to offer smaller, well-structured time slots for new people approaching the area. In the past 12 months we have collaborated with three departments, offering a two-to-three-hour window of time for them to deliver a workshop, talk or tour. This collaboration has then inspired those individuals to develop full days of delivery or even a full week.

We should not feel constrained by the traditional work experience model that is often thought of when considering such a programme. WMG Outreach has demonstrated that a project-based delivery, focussed within a managed zone, can cater for up to 30 young people at a time, providing each student with a job role and technical hands-on experience. This large-scale model allows the schools an easier way of satisfying their assessment criteria, rather than finding 30 unique work experience locations. Due to the overlap in our activities, we have set up a working group that included Human Resources, Technical Services and our safeguarding lead to create and disseminate good practice across the department.

A big driver for this initiative was the creation of role models that are here to inspire the next generation. The young people are very grateful for the time that is put in to teaching them or demonstrating something new, feedback from the experience included:

> *I have learnt a lot of new skills from WMG. I have learnt about all the different materials and design.*

> *This was an amazing opportunity to gain insight into the world of engineering.*
>
> *People were very nice, friendly and helpful. I learnt a lot by seeing what goes on behind the scenes and about the future of engineering.* (**Participant comments**)

It has also been great to see this relationship working in reverse, with the young people inspiring our team members. It has been important to create a diverse group within our work experience team. The range of job roles, ethnicities and lived experiences allows us to bring something new to the experience, and often we connect with the young people in different ways. We want to show that the access to higher education and industry is for everyone.

Next Steps

This year the team is taking their experiences and learning to a larger audience, connecting with Universities across the UK with the intention of starting a network of Work Experience providers as well as inspiring more to take on the role.

Project evaluation is something that is rarely done across research culture initiatives. The study through UKRI (**Shift Insight, 2024**) found that just 8% of projects sourced an external independent review, and 20% reviewed their own initiative through a self-assessment. WMG has and will continue to explore funding opportunities for work experience evaluation. It is crucial that we demonstrate the importance of such interventions, to encourage those from low socio-economic backgrounds to pursue the opportunities that are available to them.

Acknowledgements

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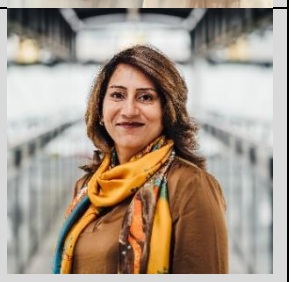
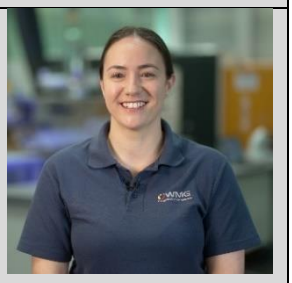
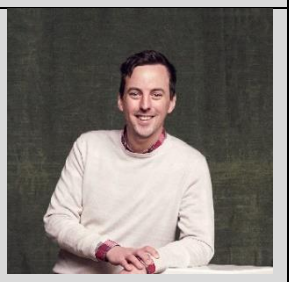
Dr Craig Carnegie is an Assistant Professor in high volume joining at WMG. He is working on an EPSRC project he was awarded, investigating process monitoring during adhesive and composite joining. He is currently leading a Research England development fund for employability schemes and is the chair of the Warwick STEM Work Experience Working Group. He has established the W.E.Inspire network, a national initiative to develop and support those delivering work experience programs across the UK.	
Dr Helena Verrill is an Associate Professor at the University of Warwick Mathematics Institute. As well as a role within teaching and research, she holds a position with a focus on outreach and is the department's director of student experience.	
Dr Asima Iqbal is an Assistant Professor at WMG, University of Warwick, delivering an interdisciplinary skills and research methods module to over 1,000 students both at UG and PG level. She is a Senior Fellow of Higher Education Academy (SFHEA) and as an academic and a practitioner, she organises and carries out capacity building programmes/workshops for students and fellow colleagues. She has been engaged in various outreach and widening participation initiatives for more than a decade which includes teaching and mentoring young adults from non-traditional backgrounds to achieve their potential while developing transferable skills to support their academic and professional development.	
Maryam Masood is Mechanical Engineer, currently serving as a teaching focussed Assistant Professor at WMG, University of Warwick leading a postgraduate research methods module. Maryam is an Education for Sustainable Development (ESD) champion for WMG and a member for the central ESD Action Group. Maryam is also a WIHEA Fellow. Her research interest is in sustainability, waste management, education for sustainable development and intercultural awareness in HE setting.	

Anupriya K. Haridas is a materials chemist and battery scientist with over a decade of experience advancing lithium-ion and next-battery technologies across multicultural and cross-functional research groups within India, South Korea, and the UK. As an Assistant Professor at WMG, she spear-headed the research on cathode materials and electrolytes bridging the gap between academic and industrial research via the High Value Manufacturing (HVM) Catapult Project. She is an experienced reviewer and grant evaluator for various international funding agencies across the UK, Europe and Asia and is committed to translating cutting-edge materials research into sustainable energy storage solutions.	
Dr Mona Faraji Niri is Associate Professor of Battery Modelling at WMG, University of Warwick, with a PhD in control engineering from IUST. She previously held academic posts at IUST and Pooyesh Institute. A Fellow of the Faraday Institution, Alan Turing Institute, and Higher Education Academy, and MIET member, she specialises in modelling, control, and AI for energy storage and battery systems. Her work spans lithium-ion batteries, EV powertrains, and manufacturing optimisation. Recognised as a Future Promise by the Royal Academy of Engineering, she received the TechWomen100 (2021) and multiple Warwick awards, and reviews for major journals and funding bodies.	
Bethany Haynes is an Engineering Technician at the University of Warwick. She has a decade of experience of working within a fast paced, hands-on technical laboratory environment. She spent the last three years working with local small-to-medium enterprises (SMEs) to design, develop and prototype new manufacturing techniques and approaches. Bethany started her career working with young people at Bluecoat School and Music College and has continued to provide work experiences and outreach activities to help inspire the next generation of technical professionals.	

Previously Chief Engineer responsible for part of the East Midlands electricity distribution network, Sarah Wilson now supports academics and researchers in WMG, one of two engineering departments at University of Warwick. From clarifying research strategies to finding funding to enact these, through to considering publication strategies and capturing arising impact from projects, Sarah leads a small dynamic team to enable the academic research lifecycle. A particular interest is in the career development of colleagues, and Sarah takes an active part in the department's mentoring, promotions and tenure processes as well as managing the fellowship pipeline and international activities.	
Phil is the Widening Participation Co-ordinator for WMG, a department at the University of Warwick. His role is to create a bridge between school education and engineering careers through outreach and work experience projects. He is also the Faculty Public Engagement Lead for Science, Engineering and Medicine, bringing his experience of working with different departments to create interdisciplinary and collaborative projects. Phil uses his position within the University of Warwick to bring the real experts on cutting-edge technologies out of the academy and into public spaces, engaging with young and old to build trust in science and engineering.	

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The National Centre for Research Culture at the University of Warwick: Vision and current activities

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Abstract

In recognition of the need for collaboration to effectively address recognised research culture challenges, the University of Warwick established the National Centre for Research Culture in 2023. The Centre aims to bring together organisations and individuals involved in the funding, regulation, production and dissemination of research to share ideas and best practice, coordinate our collective effort, and serve as a long-term, stable hub for knowledge curation, training and innovative research into research culture. This paper describes the background to the establishment of the National Centre for Research Culture, the initial structure of and vision for the Centre, and the activities carried out in its first 18 months of operation.

Keywords: research culture, conference, seminar, training, positive action

Introduction

In the UK's research and innovation sector, research culture is a prominent issue. Reports have evidenced challenges in research including unhealthy competition, a lack of diversity, bullying and harassment, job insecurity, and challenges with reproducibility of research (**BEIS, 2021; Wellcome Trust, 2020**). These challenges have led to a need for universities, funding bodies, industry partners and other stakeholders to co-create solutions to improve research culture for everyone involved in research, both now and for future generations of the research community.

The National Centre for Research Culture (NCRC) was established at the University of Warwick in response to these challenges, with the aim of working together with UK research funding bodies, universities, networks, research organisations, and other stakeholders to coordinate our collective efforts - seeking synergy and sharing best practice across the sector, with a sustained focus on improving research culture.

This article outlines how the National Centre came about, its initial vision and objectives, and the activities it organised in its first one and half years.

Brief History of the National Centre for Research Culture (NCRC)

Prof. Caroline Meyer (Pro Vice Chancellor for Research) first conceived the idea to create a national collaboration hub for research culture work at the University of Warwick in the second half of 2022. Sotaro Kita (then Academic Director for Research Culture) presented the rough initial idea to the University Executive Board in October 2022 as a part of the University's overall research culture strategy. Prof. Meyer and Kita shaped the current form of the Centre by December 2022. The design of the National Centre was underpinned by Warwick's understanding of key components of research culture (**Kita, 2024**). The Centre was launched in July 2023 with Kita (then Deputy Pro-Vice-Chancellor for Research) as the Director. Two foundational appointments were made in February 2024 (Head of NCRC, Dr. Marie Sams; Head of Research Culture Partnerships, Victoria Strudwick). A research assistant (Sophie Fletcher) was appointed in March 2024, and an administrative officer (Adele Kenny) in August 2024. The National Centre works closely with members of Warwick's Research and Impact Services unit (Dr. Rika Nair, Research Culture Manager; Carole Harris, Associate Director, Research Culture, Governance and Compliance).

The first advisory board meeting took place in September 2024, with external advisors (Prof. Marcus Munafò, Associate Chair and co-founder of the UK Reproducibility Network (UKRN) and Pro-Vice-Chancellor for

Research Culture at the University of Bristol; Dr. Yolana Pringle, Head of Policy and Advocacy at Vitae; Dr. Ken Emond, Head of Research at British Academy; Prof. Kate Sang, Director of the UKRI and British Academy-funded EDI Caucus at Heriot Watt University; Dr. Steven Hill, Director of Research at Research England; and an Early Career Researcher representative, Dr. Amy Godfrey, University of Warwick).

The Vision for the NCRC

Why do we need a National Centre? Any community produces culture, and the research community in academia is global, spanning across institutions in the UK and beyond. Thus, one institution cannot effectively improve research culture. Concerted effort by the whole sector is necessary. Thus, coordination and collaboration across institutions are essential. However, the effort to improve research culture in UK higher education has been fragmented: universities often carry out various short-term projects with little coordination. Duplication of effort is inevitable, since there is no clear mechanism to share good practice across the sector. Sustained, substantial efforts such as the UKRN (part-funded by Research England), the UK Institute for Technical Skills & Strategy (a technician empowerment project, funded by Research England), and the UKRI British-Academy-funded EDI Caucus are making important contributions (**The UK Reproducibility Network, 2025; UK Institute for Technical Skills & Strategy, 2025; EDICa, 2025**). However, these do not cover the full range of research culture issues, and they exist in isolation. It is crucial we seek synergy across these initiatives and broaden the scope of activities. The National Centre works with these organisations, UK research funding bodies and universities, to coordinate our collective effort, and serve as a long-term, stable hub for knowledge curation, training and innovative research into research culture.

The core aim of the National Centre is to improve research culture across the UK research sector through coordination, collaboration and sharing of relevant knowledge and good practice. There are four objectives.

- Objective 1. To build an inclusive community of practice through collaboration, curation of knowledge and best practice.
- Objective 2. To develop and implement sector-wide research culture initiatives.
- Objective 3. To facilitate empirical research and quality reviews into research culture.
- Objective 4. To develop sector-wide training on research culture.

Activities of the NCRC

In its first 18 months, the National Centre carried out the following activities to achieve its objectives.

Objective 1. Building a community of practice.

We organise the annual International Research Culture Conference. This is a forum where people share their research and practice regarding research culture. The inaugural meeting took place in September 2023 (**Nair & Kita, 2024**) and the second one in September 2024 (**Sams et al, 2025**). About 300 participants (both in-person and online) took part in the 2023 conference, and around 500 in the 2024 iteration.

We run an online seminar series, Research Culture Conversations. Speakers from different institutions share their work. Between June 2023 and February 2024, five seminars took place. The topics included supporting technical careers; doctoral and post-doctoral wellbeing, diversifying leadership, and destigmatising failure and bullying and harassment.

We run social media communities via LinkedIn. This includes a Research Culture Knowledge Exchange (approx. 1000 members), and an NCRC page (approx. 1700 followers as of February 2025). These platforms are used to rapidly share research culture-related information (e.g., reports, meetings, seminars, articles, etc.,).

We run a Research Culture Enablers Network. This is a group for professional service and academic staff who work on research culture in various institutions. They organise both in-person and virtual meetings to share knowledge. There were over 300 members as of February 2025.

Objective 2. Develop and implement research culture initiatives

We launched an innovative positive action intervention, the *Warwick PATHWAY programme*, in November 2024, to address the underrepresentation of Black academics in UK universities and research institutes (**Strudwick & Kita, 2025**). We are in the process of creating a network of similar positive action programmes to support Black researchers across the sector, *UK PATHWAY Network*, to share good practice, encourage institutions to create new positive action programmes for Black researchers, and create synergy.

Objective 3. Facilitating empirical research and quality reviews into research culture

As a part of the National Centre, we have an academic research centre, 'DEAR Centre' (*Centre for Doctoral Education and Academia Research*). This is led by Prof. Emily Henderson and Dr. James Burford in Department of Education Studies. This centre conducts research on various aspects of research culture.

We publish *the proceedings of the International Research Culture Conference* in an open access journal, *Exchanges*. The proceedings allow us to share knowledge and good practice across space and time. Those who could not attend the conference, future researchers, and practitioners can learn about the work presented at the conference. The proceedings for the 2023 conference featured 31 articles (**Johnson, 2024**).

We conducted a systematic scoping review on the wellbeing of Early Career Researchers (PhD students, postdocs, and research assistants) (**Fletcher et al., in preparation**). We reviewed 86 articles in the literature to identify factors that are associated with the wellbeing of ECRs.

Objective 4. Sector-wide training

We are in the initial stages of developing a national career development programme for mid-career Black academics, in collaboration with Dr. Francis Awolowo at Sheffield Hallam University.

Evolving NCRC

This article describes NCRC as it was in September 2024. NCRC continues to evolve, as it needs to adapt to new internal and external situations. Importantly, Kita stepped down from the Directorship in October 2025, and Prof. Kirstie Haywood was appointed as Director in January 2025. This has led to further development of the Centre. For example, the vision and objectives for NCRC were updated to reflect greater focus on its role in convening and sharing best practice across the sector.[i]

Conclusion

The National Centre for Research Culture, established in July 2023, aims to improve research culture of the UK HE and research sector. It will achieve this through facilitating coordination, sharing and collaboration among institutions. Such concerted effort is necessary to improve the culture of UK research community.

Kita is Professor of Psychology of Language at the University of Warwick. He is a former member of the Research Executive at Warwick (2021-2024) and a former Deputy Pro Vice Chancellor (2023-2024) and was responsible for research culture. He was the founding Director of National Centre for Research Culture (2023-2024). He also designed the Warwick PATHWAY programme to facilitate research careers for Black students and researchers. He obtained a PhD in psychology and linguistics at the University of Chicago. He has since worked in the Netherlands and in the UK (University of Bristol, University of Birmingham, and University of Warwick).	
Vicky is Head of Research Culture Partnerships within the National Centre for Research Culture (NCRC) at Warwick and leads on developing partnerships and collaborations with universities, research organisations, industry, funders and publishers in the UK and beyond. Specific projects within her portfolio include leadership of the Warwick PATHWAY Programme, a pilot multi-level positive action programme for Black researcher career development. With substantial experience of enabling international research collaboration, she has a keen interest in bringing together voices from different national, disciplinary and organisational contexts to enhance global research culture.	
Marie has 24+ years' experience in higher education, in professional service and teaching roles and has worked on international projects aimed at improving higher education experience. With a Doctorate in supporting women into leadership in higher education, she is passionate about culture change and making environments more inclusive. She is the Head of the National Centre for Research Culture, and leads on management of the Centre, including the NCRC roadmap, raising the visibility of research culture, and the International Research Culture conference. She has facilitated work in identifying institutional problem statements and shaped recommendations for improving wellbeing of early career researchers.	

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Endnotes

[ii] For more details, see: https://warwick.ac.uk/research/ncrc/