

POSTGRADUATE RESEARCH CULTURE: PROVIDING A POSITIVE LEARNING ENVIRONMENT AND EXPERIENCE

NATALIE STEWART
Doctoral College and Business School
Bournemouth University
Poole, UK
nstewart@bournemouth.ac.uk

MARTYN POLKINGHORNE
Business School and Centre for Fusion Learning Innovation and Excellence
Bournemouth University
Poole, UK
polkinghornem@bournemouth.ac.uk

CAMILA DEVIS-ROZENTAL
Business School and Service Excellence
Bournemouth University
Poole, UK
cdevisrozentel@bournemouth.ac.uk

Abstract: This research is focussed upon Postgraduate Research (PGR) students undertaking a university research-based PhD. When first launched, PhD research followed a process based upon a student assimilating knowledge from their supervisor. This one-to-one relationship is impossible now due to the pressure on completion rates. In current practice, doctoral research is inherently conducted in isolation, with increasing expectations placed upon outputs. This has had a negative impact on doctoral students who increasingly report poor mental health. In this context, the research culture and environment in which a PGR undertakes their research degree has become increasingly important. This research study considers the role of PGR research culture, and the key drivers which are pivotal for the successful support and experience of PGRs. It addresses the complexity in understanding and defining what is meant by research culture, and the nuances associated with the term. This study contextualises PGR research culture through an innovative new model which could be used as a framework to provide positive learning environments for PGRs. Whilst this study has been focussed upon the UK, where there are currently over 100,000 PGRs, the findings are applicable to other countries seeking to better support their own PGR communities.

Keywords: postgraduate research; research culture, student, PGR; higher education; university.

1 Introduction

The UK Government's 'Research and Development People and Culture' strategy (Department for Business, Energy and Industrial Strategy [BEIS], 2021) sets out the desire to develop the country's research and innovation workforce by putting people at the heart of their plans, ensuring researchers are working in positive and inclusive cultures, and the expectation is that these cultures will in time nurture the development of individuals so that their performance and productivity can be maximised. As defined by the Government's industrial strategy 'Building a Britain Fit for the Future' (BEIS, 2017), there is a target to attract 150,000 additional people into research and development roles to support the UK's aim of increasing research intensity through the investment of 2.4% of Gross domestic Product (GDP) on research and

development activity by 2027. Currently, this spend stands at 1.7% and is below the Organisation for Economic Co-operation and Development's (OECD) average of 2.5% in 2019 (OECD, 2022).

Of important note is the fact that the UK has a sustainable talent pipeline of postgraduate researchers (PGRs) undertaking university-based research degrees, with a consistent 25,000 – 30,000 of these students obtaining their research degrees annually (Higher Education Statistics Agency [HESA], 2021a). Clearly, the development of these PGRs will be an integral part of achieving this Government target of increasing research intensity, and to support this we need to ensure that PGRs operate in a positive research culture from the very start of the research experience (BEIS, 2021). If PGRs experience consistently positive research cultures during their research degree, it is anticipated they will be more likely to continue their career within research and development, which is of course essential to ensure the longevity of the UK's research outputs.

However, a Higher Education Policy Institute (HEPI) study found that while 67% of PhD students wished to pursue a career in academic research, only 30% have stayed in academia three years after graduation, and only half of those exploring careers beyond academia were still working in research orientated roles (Cornell, 2020). The most cited reason within the Cornell study, for discontinuing careers in research was a lack of work-life balance. Metcalfe *et al.* (2018) reported that PGRs were often experiencing a culture of long-hours, and pressure to regularly produce research outputs. Job security has also been identified as being a key concern for researchers, which negatively impacts upon the overall research culture (Wellcome Trust, 2020).

While there is a rapidly evolving national agenda in the research and development sector, with significant potential benefits to Higher Education providers, specifically in relation to increasing research funding from government, it is important to explore the expectations applied to universities, in terms of both their support for PGRs, and the role which they play in terms of promoting a positive research culture. If Higher Education providers wish to continue to contribute to quality research, and in promoting the UK as world leading in research intensity, ensuring positive research cultures at all levels is thought to be crucial.

In this paper the drivers and challenges to implementing a positive research culture for PGRs are considered, and as previously proposed by Devis-Rozental (2018), a 'head' (knowledge and experiences), 'hand' (approach) and 'heart' (emotional response) approach is used to model the key factors. Whilst this study has been focussed upon the UK where there are currently over 100,000 PGRs, the model is applicable to other countries seeking to better support their own PGR communities.

2 Postgraduate Research Degrees

Across the UK Higher Education sector, there are a range of doctoral and master's degrees which can be gained by undertaking a programme of research, the most well-known being the PhD or DPhil (Doctor of Philosophy). The first PhD was awarded over 100 years ago by the University of Oxford (Bogle, 2017) and was originally intended as a mechanism for training people enroute to becoming an academic. The primary component of a research degree being, for the student to undertake independent learning about a topic through a programme of research. Within the UK educational system, in line with Quality Assurance Agency (QAA) expectations, such research degrees are usually awarded through the examination of a thesis, and the oral defense of the research known as a *viva voce* (QAA, 2020a; QAA, 2020b).

The QAA are the independent quality body for Higher Education in the UK which has produced a Quality Code (QAA, 2018) and a set of advice and guidance documents to support Higher

Education providers in meeting their obligations. Specific advice and guidance have been developed under the theme of research degrees, and this includes expectations for supervisory provision, professional development, progression / assessment mechanisms and an emphasis on the importance of providing a supportive and inclusive research environment for all PGRs. The QAA issues a Doctoral Degree Characteristics Statement (QAA, 2020a), and a Master's Degree Characteristic Statement (QAA, 2020b), to describe the distinctive features of the doctoral, and research master's degrees.

Unlike taught degrees, for most research degrees within the UK, there are no mandatory credited taught components. Some professional doctoral degrees, such as the Doctor of Education, have taught phases, and individual institutional programmes may require PhD candidates to undertake some form of credited professional development. However, such credit bearing training and development is not a mandatory regulatory requirement. Due to the unique nature of original research projects being undertaken, research degrees are often associated with a sense of isolation (Metcalf *et al.*, 2018) and loneliness (Cantor, 2020) for the student, when compared to the cohort-based approach which applies to taught programmes.

2.1 Defining Postgraduate Researchers

A postgraduate researcher (PGR) is an individual enrolled on a doctoral or research master's degree. PGRs are often interchangeably referred to as postgraduate students, doctoral candidates (for those on doctoral routes), and researchers. For the purpose of this paper, postgraduate researcher (PGR) will be used when referring to this distinct student group, irrespective of other enrolment characteristics such as research degree type, study mode, fee status or funding source.

In the 2020-21 academic year there were 114,405 PGRs in the UK, accounting for only 4% of the UK Higher Education student population (HESA, 2021b). Given PGRs are the minority of the UK Higher Education student population, it is unsurprising that institutions are more likely to focus on the 73% of students who make up the undergraduate population (HESA, 2021b). As a result, a much greater focus is placed on the undergraduate student experience, and to the support which they are offered.

Within the UK, there is an even gender split of PGRs with the largest proportion (44%) being in the mature age group of 30 years and over (HESA, 2021a). This demographic data has been consistent over the last 5 years, and this is not unsurprising given the time required to progress through the stages of Higher Education to reach the level of undertaking a postgraduate research degree, particularly when considering the financial commitment specifically prior to the introduction of the Postgraduate Doctoral Loan in 2018 (GOV, 2022).

However, what is being seen in the data is an increase in the reported percentage of PGRs disclosing a known disability, including physical disabilities, specific learning difficulties and mental health conditions, which has risen from 8% to 12% over the last 5 years (HESA, 2021a). This change is significant, and of interest when considering the PGR experience. A rise in disability disclosure is positive to see, nevertheless equity, diversity and inclusion practices within the research community, and associated learning environments, must reflect this so that universities can demonstrate commitment to a positive research culture which is accessible to all.

PGRs are not ubiquitously viewed as being part of the student population, and instead, within many universities, PGRs can feel more aligned to being a member of staff. In some cases, the PGR may be a member of staff, i.e., studying part-time alongside work, or working part-time alongside studies. This juxtaposing student-staff status is an ongoing and growing

national debate, with the University and College Union campaigning for PGRs to be classified as being staff and not students (University and College Union, 2021). Further to this, as initially set out in the UK Research and Development Roadmap (Department for Business, Energy and Industrial Strategy [BEIS], 2020), UK Research and Innovation (UKRI) have committed to consulting on a 'new deal for postgraduate researchers' (UKRI, 2021a) which commenced earlier this year [2022], with the primary objective of promoting and supporting a positive research culture for doctoral candidates, and with a focus upon their rights and conditions.

2.2 Drivers of Research Culture Change

There has been a growing focus across the sector placed upon the importance of a positive research culture through events such as the 2019 UKCGE Annual Conference *enhancing postgraduate research cultures*, and the revised sector standards such as the Concordat to Support the Career Development of Researchers (Vitae, 2019). Dr Owen Gower, Director of UK Council for Graduate Education (UKCGE) states:

“Positive postgraduate research cultures are pivotal to the success of the UK’s provision of postgraduate education” (Gower, 2019).

Research culture is thought to be a substantive influencer in the overall student experience for PGRs in the UK Higher Education sector. In consecutive editions of the national, sector wide, Postgraduate Research Experience Survey (PRES), findings consistently highlight that over a third of responding PGRs are expressing dissatisfaction with their experience of the research culture within their own university. Research culture is the least positively responded to 'core area' of student experience. Other core areas explored within the PRES are supervision, research skills, resources, professional development, progression, and responsibilities. Concerningly, Manathunga (2007b) found that some students were not comfortable talking to their supervisors about access to the institutional research culture, or that they felt they were not valued as part of the research culture, thereby not receiving the academic and social integration required to help achieve their potential. This, alongside the dissatisfaction highlighted in the PRES, further spotlights the need for deeper exploration of what, and how, PGRs can access positive research cultures, and the factors that may influence their access.

Increasingly, research funders, Higher Education providers and research organisations, are releasing and promoting their own research culture statements, outlining their own interpretations of the actions which they plan to undertake to promote and deliver better research cultures within their sectors. There has also been a steady increase in the number of surveys exploring research culture experience. This is a step in the right direction, however, unless findings are supported by positive measurable change and actions, we will remain a long way from seeing progressive steps to a healthier, more supportive, and positive research culture, environment and experience for PGRs.

UK Research and Innovation (UKRI) issued a joint statement of expectation for research training (UKRI, 2016) which clearly sets out the ambitions of leading research funders such as the Wellcome Trust, the British Heart Foundation and Cancer Research UK, for developing highly skilled researchers who will have a positive impact upon national researcher capacity, capabilities, and impact through setting out expectations for research organisation and the training environment, students, collaborators and funders. This joint statement establishes goals for driving the promotion of positive research cultures through transparency, dedicated support, widening opportunities, and by encouraging peer support. This statement sets an example to all funders, institutions and individuals that there is more to being a successful researcher than just measuring outputs, commonly referred to as 'publish or perish'.

The revised Concordat to Support the Career Development of Researchers (Vitae, 2019) sets out additional expectations for funders, institutions, managers of researchers and researchers themselves, to ensure that all researchers are working and studying in a supportive research environment with the availability of appropriate support and development opportunities.

The Wellcome Trust carried out a global survey exploring *what researchers think of the research cultures they work in* (2020). Compared to the PRES, this survey more comprehensively explored views of the research culture. When asked to describe their current research culture experience, over 55% of respondents denoted negative sentiment, compared to only 33% positive. These findings strengthen the rationale for promoting more positive research cultures in UK universities to help them to retain talent, and to increase research and innovation capacity.

Given the interconnected and often complex university communities PGRs can find themselves being active in, and belonging to, the overarching institutional research culture will often have significant influence upon the research cultures experienced by PGRs. Leading research organisations in the UK agree that nurturing a positive research culture is essential for achieving a thriving community of excellent researchers (Chaplain and Price, 2018; Vitae, 2019; UKRI, 2021b).

3 Organisational Support for Postgraduate Researchers

While most of the academic and administrative support within UK Higher Education providers is mainly directed towards addressing the needs of undergraduate students, PGRs are in a fortunate position to often have specialist, dedicated, and knowledgeable departments tailored to support their bespoke needs, and to enhance their overall experience. These departments are widely referred to as a Graduate School, Doctoral College, Doctoral Academy or Doctoral School (Smith and Wynne, 2021). These functions play central roles in advocating for specific PGRs needs, championing for change, and driving institutional improvements to research cultures with university wide initiatives. These departments are essential for promoting parity of experience across what are often very different disciplines areas within institutions, each with their own perception of what a positive research culture can be and should be.

However, the primary point of contact and support for PGRs commonly resides with the supervisory academic team (Devos *et al.*, 2016; Metcalfe *et al.*, 2018). Effective supervision has been shown to be a major contributing factor in terms of PGR completion rates (Manathunga, 2005; Devos *et al.*, 2016; Polkinghorne *et al.*, 2023) and their individual wellbeing (Casey *et al.*, 2021). Importantly for this research, access to research cultures indicates the significant influence that supervisors have in the overall PGR experience, and the potential role they can play in promoting positive research cultures for their PGRs.

3.1 Supervisory Support

Supervisors are especially influential to a PGR's experiences during their research degree, particularly with regard to how an individual PGR supervisor's own research students are integrated into the existing research culture (Pearson and Brew, 2002; Manathunga, 2007a; Lee, 2008). Lovitts (2001) found that PGRs need to experience academic and social integration to achieve maximum benefit from their research degree. From this study it was determined that a failure to achieve social integration can result in dissatisfaction which may influence a PGRs decision whether to continue their doctoral programme. Meanwhile, Manathunga (2007b) reported that some students feel unable to, or uncomfortable with, talking to their supervisors about access to the institutional research culture, especially if they felt they are not valued as part of that research culture.

A PGRs cohesion with their supervisors has been demonstrated to also be a contributing factor to student progression (Sverdlik *et al.*, 2018). Furthermore, a lack of PGR-supervisor cohesion can result in PGRs being unable to receive the academic and social integration necessary to help them to achieve their potential, thereby increasing the risk of dissatisfaction and ultimately attrition (Lovitts, 2001; Sverdlik *et al.*, 2018). This highlights the importance of social and research culture integration, and socialisation, which are to be expected through good supervision (Taylor, 2019), and yet a supervisor's experience and support of research culture may be derived from their own time as a doctoral student (Lee, 2008), as their own personal journey will likely be an influencing factor on the PGR experience and support which they themselves then provide to their own students.

The UK Research Supervision Survey (UKRSS) is a national survey exploring the experience of doctoral supervisors. Launched in 2021 by the UK Council of Graduate Education (UKCGE), it has a purpose to:

“...identify and share supervisory practices, to enhance the support available to doctoral supervisors, and to provide insights into the culture of research supervision.” (UKCGE, 2021, p.9).

From an analysis of the data collected by the UKRSS in 2021, supervisors reported feeling valued by their doctoral candidate, but acknowledged that the ever evolving and multi-faceted role of supervising, and working in academia in general, is increasingly demanding. As a result, this is putting growing pressure on their work-life balance, causing them to feel less positive about their position, and about being a role model for their students. The Cornell (2020) report corroborates this finding from the PGR perspective, and reports that for many, their primary reason for wanting to leave academia is a lack of work-life balance. Both findings highlight the central role supervisors have in managing the expectations of their PGRs regarding working in academia and the daily and long-term demands.

Wisker *et al.*, (2007) identified that both students and supervisors feel isolated unless they are positioned within a research culture that supports their research work. This sense of isolation is an exacerbated challenge for distance students (Billot *et al.*, 2013), and during the Covid-19 pandemic this of course applied to the entire Higher Education community (O'Sullivan *et al.*, 2022; Leidner *et al.*, 2022) due to limitations for social, and physical interaction due to enforced national lockdown measures. Opportunity to socialise became more sought after for many PGRs, and researcher development programmes played a central role in supporting research work, and enabling contact, during the Covid-19 pandemic. Online workshops were identified by PGRs as an opportunity to interact and connect with their fellow PGRs (Stewart *et al.*, 2022) keeping them motivated and engaged. Ongoing conversations between PGRs and supervisors in relation to researcher development opportunities, and the role that these programmes play in promoting positive research cultures, further emphasises the benefits of a cohesive PGR-supervisor relationship.

It is important to acknowledge that PGR supervisors are also influenced by, and could be limited by, the broader organisational culture and research culture within their disciplines, faculty and institutions, which then combine with their own prior personal experiences (Lee, 2008; Polkinghorne *et al.*, 2023). Supervisors should not therefore be seen as being solely responsible for promoting positive research cultures for their students in this regard. Instead, as highlighted by Oakley (2021), the research culture across the Higher Education sector, and within individual institutions, should help promote positive supervision with a resulting net benefit of promoting a positive PGR research culture. Structures should be in place to support supervisors to deliver quality supervision, and this should include the ability to manage supervisor workloads (Taylor, 2021) so that they themselves encounter a more positive research experience, which they can then reflect onto their PGRs.

3.2 Socialisation and Peer Support

Gardner (2007) explored the difference in socialisation processes between chemistry (natural sciences) and history (humanities) based PGRs. In both cases strong discipline-based research cultures were present. Socialisation is said to be a primary process for embedding an individual within a culture (Weidman *et al.*, 2001). Gardner found that access to teaching, financial support, and supervisory styles varied significantly between the two disciplines. She also found that socialisation occurred at multiple levels.

A cohesive institutional approach to supporting student transition to university has been evidenced as being a positive way to enhance socialisation and sense of belonging (Rozental-Devis, 2020; Devis-Rozental and Barron, 2020; Devis-Rozental and Clarke, 2021), and may be a key influencing factor on a student's overall university experience and success (Meehan and Howells, 2017; Devis-Rozental and Clarke, 2020). These findings support the need to explore research culture from a variety of perspectives if the promotion of a positive research culture across disciplines is to be achieved, and a consistent student experience delivered (Devis-Rozental and Clarke, 2021).

Having established that socialisation is important to students, including PGRs, and to the research culture in which they operate, one often over-looked source of support and socialisation for PGRs is 'peer support'. Peer networks are essential support mechanisms for PGRs to help foster a sense of belonging, identity and community, and they often take the form of support from other PGRs. As such, peer networks can have valuable contributions to PGR progression (Devenish *et al.*, 2009) and can be engaged with through a variety of ways including societies (McDonald *et al.*, 2015), writing groups (Beasy *et al.*, 2020), and group supervision practices (Neville, 2008). Peer-to-peer learning was identified by Homer *et al.* (2020) as a welcomed and valuable method for reducing the negative impacts of undertaking a research degree on a PGR's mental health and well-being including reducing isolation and loneliness (Cornwall *et al.*, 2019).

Research by Lovitts (2001) determined that PGRs need to experience academic and social integration to achieve maximum benefit from their research degree, and that failure to achieve social integration can result in dissatisfaction, possibly even influencing a subsequent decision to leave the doctoral programme. Positive research cultures need to actively support academic and social integration during a research degree to help PGRs flourish, and to reduce attrition rates. Such reduction in attrition rates benefit not only the PGR themselves, but also the host institution, any relevant funders and the wider UK workforce.

During the years of the COVID-19 pandemic, overall PGR satisfaction, as reported in the Postgraduate Research Experience survey (PRES) results (2020; 2021) fell year on year, emphasising the need for PGRs to interact with others in a social context, and to be able to access the sense of belonging, and the positive benefits, that peer networks can provide.

Findings from the PRES (2020) highlighted little differentiation in satisfaction between full and part-time PGRs across each of the experience themes with the exception of research culture, with part-time PGRs being substantially less satisfied than their full-time peers. What was further highlighted in these findings is while part-time PGRs are aware of the opportunities for social interaction, their access to become involved is limited with fewer opportunities to partake in seminars, to discuss research, and to be stimulated by the wider research community. Cornwall *et al.* (2019) found that integrating PGRs into the research community was highly supported by university workshops, and was helpful in increasing a positive sense of belonging. Increasing awareness of part-time PGR requirements to replicate this support and sense of belonging is now also required.

4 Defining Research Culture

Defining research culture is challenging as there is no one globally, or nationally, accepted definition when researching or discussing this phrase. An early definition of research culture was expressed by Schein as being the:

“values and ideas that researchers use to handle research related problems. It is the combination of all the activities, all the thinking, all the collaboration and cooperation carried out to promote the research” (Schein, 1985, p.2).

This definition, like many others, primarily focuses on the final research outcome, and its promotion, without taking into consideration the wider complexities of students, and Higher Education professionals in non-research roles, who influence and impact upon the research culture in Higher Education.

More recently, The Royal Society (2017) have broadly defined research culture as “encompassing the behaviours, values, expectations, attitudes, and norms of research communities”, providing a holistic, yet intangible definition. Whilst well-rounded, The Royal Society definition continues to have significant complexities in terms of its understanding and application. These complexities are further extended when applied to a multi-faceted and interweaved university setting, in which PGRs often belong to multiple communities (Botcherby, 2021). These various communities are likely to have differing behaviours, values, expectations, attitudes, and norms. This presents challenges when endeavouring to promote a positive research culture. Nevertheless, this comprehensive, multi-dimensional view and definition of research culture provides scope for interpretation, and also for innovations to enable their development to make them more encouraging, dynamic and positive.

4.1 Organisational Culture

A PGRs decision to start their studies, and continue with their research degree, is thought to be highly influenced by the perceived organisational and departmental cultures and structures within which they operate (Golde, 2005). When investigating the factors influencing, and affecting, research culture in universities for PGRs, the organisational culture must therefore be considered, and the range of variables within this environment studied. Organisational culture may therefore have a significant impact upon the experience of any given research culture. Allowing for the interconnected, and often highly complex, university communities in which PGRs may take an active role, the national and overarching institutional (organisational) culture, and smaller scholarly community cultures which may develop at a local level, will together influence on the overall research culture experience for any specific group of PGRs.

By understanding these cultures, and their relationship to each other, it is possible to gain a clearer picture of the PGR research culture itself and from this understanding, priority actions can be determined to develop stronger linkages between the hierarchy of cultures so that tensions can be minimised, and synergies can be developed.

4.2 Mapping the Factors Driving PGR Research Culture

Culture change takes time, effort and a commitment and involvement by all stakeholders. It needs clarity, consistency of approach and overall, a sound strategy. It must be fostered and embedded in every aspect of a provision and at all levels. Improving PGR's culture must therefore be something that considers PGRs' own expectations and lived experience, their wellbeing and opportunities for them to develop and flourish in their chosen field. Doing so can have a positive impact on the PGR's mental health, and that in itself is a gain.

Improving the research culture will also attract and retain candidates who will learn and foster these healthy learning spaces. Doing so, will reinforce this new culture, and over time it will become the status quo. This will be positive for universities and their provision.

Within the related literature, a re-occurring focus is the symbiotic relationship between the act of undertaking research, and the productivity of research outputs and activities. Perspectives and drivers vary from that of undergraduate research culture, discipline-based research culture, academic faculty staff research culture, and the culture of undertaking research within professional services (Bland and Ruffin, 1992, Pratt *et al.*, 1999).

Furthermore, collaborative approaches to research are becoming increasingly expected by research funders, and this has been highlighted as an area for development in the Economic and Social Research Council's (ESRC) commissioned review of PhD's in the social sciences (Tazzyman *et al.*, 2021) and the Engineering and Physical Sciences Research Council (EPSRC) review of EPSRC-funded doctoral education (Gladden, 2021). The work explored in this paper has considered parameters required for encouraging research to take place using a structured head, hand and heart approach proposed by Devis-Rozental (2018), alongside the importance of supervisory and peer support relationships, and the environment in which the research degree is being undertaken. Based upon this, and using the head, hand heart approach, we propose *the triple H model of factors influencing PGR research culture* (Figure 1) which synthesises key factors influencing PGR research culture. The factors have been grouped under the headings of 'expectations' (individual and organisational) which in this sense relate to our thinking, and values, and is represented by the 'head' symbol 'collaboration' (opportunities and approach), which links to what we do, and how we do it, and is represented by the 'hand' symbol, and 'wellbeing' (services and behaviours), which connects to the support which we access, and the way that we interface with others around us and is represented by the 'heart' symbol.

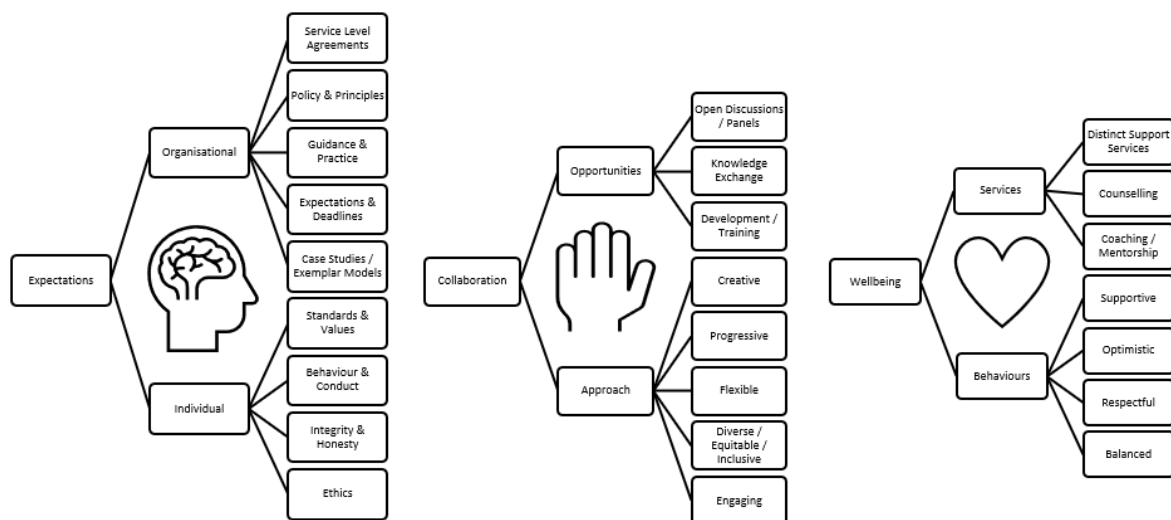


Figure 1. The triple H model of factors influencing PGR research culture

Source: Author's Own Work

Applying this model as a framework is a good starting point for those interested in the development of positive learning environments as part of the PGR culture. Since each research environment is different and has its own nuances, the model provides parameters whilst remaining flexible within the three distinct areas.

5 Conclusion

Given the scale of PGR dissatisfaction in their research culture at a national level, it is surprising to find that whilst student experience is widely researched through a variety of lenses, there is limited research looking at this specific aspect of PGR experience.

This paper has identified key factors influencing PGR research cultures in UK Higher Education institutions. To successfully develop and promote a positive PGR research culture, a comprehensive understanding of the factors influencing research culture is required. The better an understanding we have of these factors, and importantly, the role they each plays in a PGRs experience of research culture, the more we can focus institutional efforts on tackling negative influencers and promoting positive influencers.

What this paper highlights are the complex, interrelated factors influencing PGR experience of their research culture, and it would be prudent to explore ways to promote positive behaviours and norms across these areas simultaneously to maximise benefit and potential outcome.

As noted, the individual institutional culture will likely have a direct influence upon the research culture of the institution, and therefore each institution will need to explore and enhance research culture in their individual contexts, listening to the student voice of their own PGR populations, and working collaboratively with them to create a positive postgraduate research culture. Within this paper we propose *the triple H model of factors influencing PGR research culture model* as a framework from which to start this process.

What this study has also highlighted is the importance of focussing, not only on the opportunities and initiatives to promote a positive research culture, but also on individual PGRS and supervisors, and the pivotal roles that they play.

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