

## Appendix 4. Qualitative research

### A4.1 Aims and approaches

Qualitative research with individuals was the heart of this engagement exercise. This comprised broadly two phases – an initial series of 12 scoping interviews in autumn 2021 and then the main sequence of 10 roundtables stratified across a range of audience types during February and March 2022, followed by two roundtables to review emerging findings in April 2022 and two further in summer 2022 to validate option development.

All the interviews and roundtables (which are also referred to here as ‘groups’) were online. Roundtables were facilitated by a senior CRAC staff member, supported by a second team member, implemented using either Teams or Zoom with a 90 minute duration. The interviews and roundtables were recorded so that the notes taken by CRAC staff could be supplemented if necessary, but as all participants were given an assurance that their contributions would remain confidential (in order that they could speak openly) all outputs have been anonymised. The broad stratification of the roundtables is shown in Table A4.1.

Round-table	Audience	Attendees	Notes
1	DTP leads	4	Industrial action that day reduced group size
2	Learned societies/funders	10	
3	Careers professionals	9	
4	CDT/CDA/CDP leads	10	
5	Other academics	8	
6	‘Engaged’ non-academic employers’	9	
7	Recent doctoral alumni working in HE	6	
8	Other academics	7	Added to enable ‘missing’ participants to take part
9	Recent doctoral alumni working outside HE	7	
10	‘Non-engaged’ non-academic employers	5	
R1	Reflection group (1) – mixed audience	4	Focus on future issues
R2	Reflection group (2) – mixed audience	6	Focus on future issues
V1	Validation group (1) – mixed audience	5	Review elements/options
V2	Validation group (2) – mixed audience	5	Review elements/options

Table A4.1 Stratification of roundtable events

### A4.2 Participation

A total of 86 individuals took part in these phases of the research, of whom 63 were women and 23 men. Five individuals were of ethnic minority background but other personal characteristics were not systematically collected. 54 of the participants worked at universities, most of whom were academic staff but also some in other roles such as careers

advisers, researcher developers or academic support roles. The ‘academic’ participants were from universities in all four UK nations, with 49 different universities represented, including two thirds of the Russell Group’s member institutions, 16 post-92 institutions, 6 specialist arts institutions and 11 other universities. 33 of these institutions were in receipt of AHRC funding for doctoral programmes, while there were representatives from 16 unfunded institutions. The profile of these academic participants and their institutions is shown in Table A4.2.

The relatively large number of non-academic participants (32) was due to the wide range of stakeholders deliberately engaged, including doctoral programme partners outside HE, other non-academic employers, representatives of related bodies (funders, learned societies and university group bodies) and doctoral alumni working outside HE.

<b>Institution type</b>	<b>Russell Group</b>	<b>Other</b>	<b>Post-92</b>	<b>Specialist</b>	<b>N</b>
Participants	18	12	17	7	54
Institutions	16	11	16	6	49
<b>AHRC-funded</b>	16	10	4	3	33
<b>Non-funded</b>	0	1	12	3	16
<b>Location</b>	<b>England</b>	<b>Scotland</b>	<b>Wales</b>	<b>N Ireland</b>	
Participants	44	4	5	1	54
Institutions	41	3	4	1	49
<b>Gender</b>	<b>Women</b>	<b>Men</b>			
Academic	37	17			54
Non-HE	26	6			32

Table A4.2 Profile of academic participants, and their institutions, in the roundtables and interviews

It should be emphasised that the sample of participants was not designed to be representative of A&H academic staff across the UK but aimed to reflect a wide range of characteristics of institution and role, including:

- Different types and sizes of institution;
- Institutions with and without AHRC funding for doctoral programmes;
- A geographical spread;
- Senior A&H staff leading DTPs and other AHRC-funded programmes;
- Other A&H staff not directly involved in such programmes;
- Individuals with different disciplinary specialisms.

In order to achieve such stratification, including engaging certain types of participant in roundtables that were designated for them, the attraction and recruitment process was purposive and very iterative. The intention had been for the first 10 groups to have 8-10 participants each, with subsequent smaller reflection and validation groups. Over 220 individuals were identified and invited as potential candidates, including some drawn from a pool of volunteers, in the iterative engagement process, from which 86 took part in a roundtable or an interview (and in a few cases more than one roundtable, as participants for

the reflection and validation groups were drawn from those who had already participated in some way). All individuals were screened prior to invitation to identify their role and certain key institutional characteristics. The requirement to set dates in advance for specific roundtables with designated audience types meant that, in practice, there was significant attrition in terms of unavailability of invitees for particular groups. Partly due to a UCU strike being called on the day of the first group (which halved its participant number), one group was re-designated during the exercise in order to enable some of the academic staff whom we had selected, and who wanted to engage, to participate.

We were, overall, pleased with the stratification achieved across the roundtables and confident that a wide range of appropriate informants and stakeholders were engaged. Many of those who took part acknowledged our effort to include them and were highly appreciative of the opportunity to contribute and the openness of the discussions.

### **A4.3 Approach to distillation of findings from the roundtables**

Our analysis of information obtained in this extensive programme of qualitative research (i.e. the roundtable groups and also interviews) was essentially thematic, building on what was learnt in the scoping phases of work in the project (and to an extent the Rapid Evidence Assessment) as well as the extensive knowledge of doctoral education within the CRAC-Vitae project team. However, our approach deliberately encouraged individual perspectives and ideas, and we consciously allowed topics and themes to emerge.

The distillation of findings that follows aims to summarise the observations and issues that arose, in a reasonably concise format. It comprises views that were held by multiple informants, although some that were raised by a smaller number of individuals but which aligned well with expected themes are also included. Where an issue was raised by a sole participant (and/or that we judged was related largely to specific individual circumstances), it was not included. While it is not possible to present the frequency of particular issues in any statistically representative way, where views were held by a large number of participants we attempt to make that clear.

We consider this analytical process to have been reasonably robust as the sequence of roundtables included two 'reflection groups' which were deliberately designed to review and validate emerging findings. The two subsequent options validation groups, which considered investment elements and options, also revisited many of the same themes. Through those additional discussions, and the precursor scoping interviews, our view is that there was progressive reinforcement of emerging issues and findings, increasing the validity of how we have distilled and articulated them. Many of the issues here are discussed in more depth in the main report, where they contribute to the development of our ideas and options for future doctoral support. In the pages that follows, key summary findings are shown in bold.

#### *A4.3.1 The roles for A&H doctoral education*

- **The purpose of A&H doctoral education is to sustain and build A&H research capacity and shape research culture, for the health of the A&H disciplines including extension of disciplinary research boundaries.**

Doctoral researchers (PGRs) are recognised as the backbone of A&H research and constitute the pipeline of talent for there to be A&H research in future.

PGRs do research that might well not be done otherwise, especially in research-performing organisations outside academia (for example, museums and archives), playing a valuable role in the total sector research effort and building its capacity.

PGRs play a key role in shaping research culture within the sector, especially in external organisations which perform research. They have the opportunity to extend disciplinary research boundaries, bringing new and experimental approaches to research.

As the AHRC distributes public funding, there is some inherent responsibility for doctoral education to contribute to ensuring the health of the A&H sector and wider research sector. There may be some tension between the intrinsic value of research done by PGRs and its value for innovation. Most participants felt that research has inherent value and therefore not all research needs to be applied.

There is variation between different A&H disciplines culturally; in some disciplinary areas most research is seen as 'pure' while in others (such as creative disciplines) much more is recognised as applied. Cultures are also mostly distinct from those in STEM fields.

There is perceived to be some tension between the role of doctoral education in ensuring disciplinary excellence and its role in training researchers for employment/careers. There is a widespread feeling that the sector has inherited doctoral education as 'the gateway to an academic career' and/or a 'licence to practice' but that those career directions are becoming progressively less common (and may not be the long-term career direction for the majority of PGRs).

- **A second role is to produce skilled individuals**

A&H doctoral education should be producing people who have high levels of skill in critical thinking and bringing creative (even playful) approaches to problem-solving, distinct from researchers in other subject areas – they can contribute to new approaches to solve society's problems. It was felt that this distinctiveness is not recognised by other disciplines – and not celebrated enough by the A&H community.

Critical analysis is different within A&H compared with other disciplines – there is more nuance and context, and A&H researchers have more ability to be comfortable with ambiguity. A mindset of how to approach research in a context of 'imperfect information' is valuable.

A&H research creates a strong interest in theory as well as the ability to reflect and to ask questions. Some identify one of these attributes as the ability to unlearn – and 'being the grit in the oyster and not the oyster'.

A&H researchers should be able to take a wider perspective than some others, but still like those in other disciplines have to deal with large volumes of complex materials quickly and have the skills to investigate well.

There is some doubt about whether the doctorate is appropriate as 'training' for a current academic career, as the latter is not all about doing research; A&H academics tend to have more teaching responsibilities than those in other disciplines and yet developing teaching expertise is not seen as integral to doctoral programmes. If it is regarded as a preparation for an academic career – at least for a proportion of the PGR population (see HESA data) – it needs to evolve further to support other aspects of the academic profession.

- **A&H research should make a contribution to society**

*“Science makes life more possible but A&H makes it more worth living”*

Potentially A&H researchers enable fresh ways of thinking about global challenges, and can contribute strongly to partnerships and networks that span different disciplines (although interdisciplinary and collaborative working is considered by some to be a relatively recent concept in A&H).

A&H PGRs have the potential to undertake research for social good – thereby making real and direct contributions to society. Developing and encouraging intellectual thinking can contribute ‘wisdom’ to society. PGRs need to be conscious of this opportunity and think about how they can play a range of constructive roles as citizens in society.

Many still regard the current system as having been designed to train academics, and so it may need radical change in order to be more effective in producing skilled researchers who are able to operate more widely across society.

#### *A4.3.2 What is AHRC’s current role in doctoral education?*

- **Leadership**

*“AHRC should be bringing clarity of purpose for doctoral education: living that purpose and driving intentional and purposeful change”.*

There is a strategic role for AHRC in ensuring that A&H doctoral education is more than the sum of its disciplinary or institutional parts. It should function as a gatekeeper – setting standards for the quality of doctoral provision and supporting institutions to keep to them. AHRC should showcase good practice and support HEIs to work together to enhance access and research culture. AHRC’s own provision should be the gold standard.

AHRC needs to remain a key funder of PhD research, for a multitude of reasons including for strategic purposes such as the health of disciplines and research capacity. AHRC funding (or other full funding) makes it possible for some students to do a PhD without going into debt – if that is not possible, access to doctoral research will be restricted.

In AHRC’s wider role in assuring standards, could the AHRC ‘accredit’ other (i.e. non-AHRC funded) doctoral provision that meets AHRC standards? This was proposed as a way to bridge the gap between those institutions (or disciplines) which receive AHRC funding and those which do not – due to limited funding rather than lack of quality. Recognition by AHRC would enable these institutions to promote their doctoral programmes and particularly to attract highly-skilled international researchers to the UK. They could also offer access to quality A&H doctoral education in areas of the UK where AHRC-funded programmes do not have geographical coverage, thereby supporting better equality of access.

Government policy continues to tilt towards STEM, so AHRC needs to fight the A&H corner and advocate its value within a variety of policy contexts. As part of this AHRC should provide visibility for all the A&H disciplines. There is some appreciation that it is doing this advocacy role better than it did 20 years ago.

There are widespread feelings that AHRC should do more horizon-scanning so that it can develop a stronger vision and clearer statements of ambition and direction. Some consider that organisationally it currently has the bandwidth to facilitate such leadership and would welcome the opportunity to participate in this exercise.

The current increased focus on interdisciplinary research is good, but it should not be at the expense of developing good fundamental research within the disciplines. AHRC needs to play a strategic role to maintain a good balance.

AHRC should ensure that A&H researchers are not relegated to playing a bit part in multi-disciplinary responses to global challenges and should identify the big issues where A&H can play a major role in addressing societal challenges.

#### *A4.3.3 Building on current strengths of A&H doctoral education*

- **Consolidation of existing strengths**

There is broad support for the value of structured collaborative models and the shift that has been made towards the researcher being the primary output of the doctorate, not the thesis. Collaborative models have direct benefits in providing higher quality supervision and more opportunities for the PGR, as well as indirect benefits such as building institutional collaborations which extend beyond doctoral provision.

The focus on professional development of the PGR within doctoral provision is beneficial and, in the current career context, opportunities to gain experience through activities in other sectors are seen as highly valuable.

Having a range of models for doctoral education is beneficial – the highest quality research and highest calibre PGRs are not solely found in programmes within any one model and the needs of particular disciplines and PGR communities may require different models of delivery. There was a view that institutions/collaborations should be given more freedom to develop their own models and AHRC be prepared to take more risks. AHRC should be at the forefront of doctoral education and such innovation requires risk-taking.

There is uncertainty about the scalability of the DTP model, which is comparatively expensive per PGR. Any downward pressure on scale or funding for a particular DTP could result in smaller institutions having to drop out, which could impact on overall participation.

- **Widening organisational participation**

There are very widespread views that current participation by institutions is far from inclusive (see section A4.3.4).

Bringing smaller institutions into DTP partnerships is seen as positive, albeit hard work for all partners (and smaller/post-92 institutions tend to have lower capacity to provide centralised support). But there are concerns about balance of power within partnerships, with some large lead institutions playing too dominant a role, and collaborative proposals not necessarily delivering promises in practice. Large and small/specialist institutions have complementary strengths, all of which need to be harnessed.

Given the increase in remote collaborative work, several raised the possibility of cross-UK disciplinary DTP/s that could strengthen individual disciplines.

The CDT model has allowed more non-traditional HE institutions and disciplines to access AHRC doctoral funding, supporting endangered subjects but also contributing to increases in interdisciplinary research.

The CDP model is widely praised, for the benefits to PGRs of ‘immersion’ in a non-HE environment, for providing opportunities for PGRs to work in a team environment, and for its

ability to deliver more strategically planned research, but there is not enough funding in current models to allow many external organisations to take part. This means CDA/CDP programmes may currently only be sustainable in the long term in a narrow range of (large) organisations.

- **More interdisciplinary research**

The current strategic intention to increase collaboration and interdisciplinarity within research is considered wise and should continue. Work continues to be needed to break down traditional disciplinary silos.

Most of the focus on interdisciplinary research seems to be at doctoral level – it is thought that other A&H academics need to engage more in interdisciplinary research (both within and beyond their institution) so that PGRs have role models and do not lose their interdisciplinary momentum if they do enter academic careers. Cross-disciplinary supervisory teams should be one way to enhance this.

More cross-Research Council funding/working would be helpful to reinforce the strategic importance of interdisciplinary approaches. Practically, as new disciplines or combinations emerge, it can be difficult to find peer reviewers/examiners.

Having DTP or similar funding provided in 5 year programmes is not long enough for deep strategic change to be effected (for example, in terms of embedding interdisciplinarity). It takes longer than this and so longer-duration programmes or consistency between successive programmes is needed.

At the practical level, A&H PGRs are generally enthusiastic to meet other PGRs in other disciplines and value the opportunity to engage in interdisciplinary research.

- **Developmental opportunities including placements and external partners**

The value of gaining ‘wider’ experience in a setting outside university is seen to be valuable to PGRs, irrespective of their eventual career direction but especially to those who will work outside HE ultimately (making them more employable, essentially). CDPs are very valuable in giving PGRs an opportunity to experience and fully embed within an ‘external’ environment in order to understand and learn its culture.

Shorter placements within other models undoubtedly have value, although cannot offer the same extent of benefits as full immersion. Placement availability should be increased as much as possible. There can be a lack of suitable placement opportunities in some regions, particularly outside London and the South-East, so access is not consistent. Placements should not be compulsory – some PGRs already have plenty of working experience; this and other developmental opportunities need to be tailored to a PGR’s needs based on their prior (and future) career trajectory.

Project-focused placements are felt to be attractive and effective as a developmental opportunity. Ideally a placement should offer the opportunity to develop some commercial/business skills and intrapreneurship and/or entrepreneurship skills.

There is perceived to be some tension building between the need for timely completion of the doctorate and having the time for the increasing range of other developmental activities that are available and which aid wider employability. There were some suggestions that a placement could be undertaken after submission of the thesis.

#### A4.3.4 Responding to current weaknesses in A&H doctoral education

- **Concentration of funding**

*“DTPs are essentially a cartel model”*

AHRC’s funding of doctoral programmes is very commonly viewed to result in a two tier system. Currently it is very hard for institutions ‘outside the system’ to get AHRC funding, and those without AHRC funding feel locked out. The funding and the power are concentrated in a relatively small number of institutions, which can lead to unintended consequences, such as a lack of strategic balance across subjects or poor geographical coverage.

It is currently hard for some small institutions within DTP arrangements where there is a large institution as lead – the partners have to compete for funds (‘crumbs from the table’) and niche areas tend to be overlooked.

As highlighted in an earlier section, there are financial difficulties for smaller institutions and external research organisations in participating in current models, which limits the overall distribution of funded research activity.

Ideally there needs to be some model for doctoral funding whereby smaller institutions outside current DTP or CDP models can access funding for doctoral provision.

- **Equity of access and opportunity for funding**

There is a ubiquitous view that much more needs to be done to increase equality of opportunity to access and participate in A&H PGR study. Many perceive that DTP (and some CDP) cohorts have a very narrow diversity of PGRs. That said, some CDA/CDP programmes are more effective in bringing in a wider range of students than DTPs. There is a sense that currently doctoral providers select from prospective students who have actively sought out doctoral education, rather than being able to go out more widely to students to encourage them to apply.

The application process and practicalities of doing a PhD can be opaque to potential applicants ‘on the outside’. The system needs to open up to more applicants who are employed or working outside HE, who may only be able to study part time, as well as to a wider diversity of candidates progressing from a prior degree. There needs to be more consistent/structured accreditation of prior learning and better transition support.

The increasing requirement for a Masters is in tension with the desire for a wider diversity of PGRs. *“We have to fix the masters funding problem or we are going to have an extremely homogenous cohort in the future”*. In terms of the pipeline, the ‘1+3’ model is regarded to have a positive role in increasing access.

The traditional structure of the PhD (3 year full-time, with fairly limited opportunity to flex with part-time options) hinders potentially strong ‘external’ candidates who cannot commit to full-time study or afford to live on the stipend. Adaptability of funding to individual circumstances is limited, for example to support maternity or those with caring responsibilities.

There is considerable focus on ‘excellence’ with no clarity on what that term should mean. Those who adhere to the view that doctoral education is about getting ‘the best’ PGRs into the best subjects to do original significant work are still present in institutions, although they are now the minority. However, some continued effort is required to counter residual views



that current models of provision prevent top PGRs from doing the highest possible quality of research (i.e. certain supervisors still consider that PGRs can be 'distracted' from their primary research purpose by participation in developmental opportunities).

Devolving recruitment to DTPs constrains overall diversity as institutions are less likely to 'take risks' in recruiting a diverse profile of PGRs. In many cases institutions favour students who already have sophisticated ideas about research and have contacts or are known to the institution. A more centralised system/monitoring (across providers) would enable the total diversity (of people and subject coverage) to be assessed and managed, and could enable more strategic diversification.

- **Structure of the PhD and supervision**

Supervisors are critical to the success of PGRs but also need support in delivering what have become wider responsibilities within doctoral education. Should AHRC have a role in assuring the quality of supervision?

It is generally accepted, and embedded in the Quality Code for research degrees, that multiple supervision/supervisory teams are beneficial, but are probably least widely implemented in practice in the A&H subjects. The DTP consortium model offers the opportunity for an additional supervisor based in a partner institution, providing opportunity for the PGR to experience different institutional cultures.

Similarly within CDA/CDP models, supervisors from the external partner organisations potentially bring strong benefits as they offer different perspectives and PGRs gain more understanding of other sectors; although the quality of these supervisors can be very variable – they require clear role definitions and preferably a doctoral qualification. Additionally, PGR alumni in the round tables suggested that they as alumni could be used as external supervisors in appropriate projects.

Some PGRs still feel they need permission (from their supervisor) to engage in CPD, so there is some distance yet to be travelled in terms of a uniform acceptance of its importance, i.e. a uniform culture that values CPD.

Not all PGRs are able to access the opportunities offered within current doctoral models, especially where they are part-time and either working or have other commitments. The CPD offer needs to be flexible to accommodate different needs and circumstances.

The cohort effect is seen as valuable but there needs to be a critical mass to create it. It is hard to connect cohorts across multiple HE institutions and there needs to be real benefit; PGRs may be reluctant or unable to travel across the country if a consortium is large and spread across the UK. A balance of in-person and remote engagement needs to be struck.

There needs to be a range of doctoral programmes, including models that are practice-based or applied and will appeal to mature people already in employment who wish to study and work at the same time. It is anticipated that more people will be part-time workers in future and so there may be more demand from them. Not everyone may want a fully-funded studentship: access to smaller pots of funding to support varying personal needs, such as disability and caring responsibilities, could be really helpful in improving equality and diversity of access.

The DTP model needs to be more agile/innovative. As new disciplines and cross-disciplinary topics are appearing, research groups will need to be more fluid, allowing PGRs to move

physically and virtually to work with different groups of partners. Those groupings should be based on the needs of the research, not the research based on pre-existing institutional groupings such as geographical clusters.

The current doctoral model is perceived as high risk – success only comes right at the end and is totally dependent on the thesis being submitted and examined. It could be valuable to have some formal recognition of developmental gains through training/skills elements of the programme along the way, so that if a candidate stops prematurely they still have something to mark their development. This could help employed staff in particular to engage in part-time doctoral study models and help to widen the range of those prepared to undertake doctoral study.

There should be more variety in the examination process. While the classical output of thesis or monograph has merits, as it builds publication skills, assessment of a wider portfolio of outputs of multiple types (which could include blogs, policy briefs etc, as well as academic papers) could be more appropriate in a context where many will work outside HE. There is also still much discussion on the appropriate way to examine practice-based PhDs. AHRC should provide a clearer 'framework' with which to assess PGR outcomes in the A&H.

Although broadly welcomed, opening up DTPs to international applicants has created significant additional work around permissions and visas, the costs of which are not covered by current management costs. Generally, the management fees are not seen as adequately covering institutional administrative costs, particularly for the host institution. As more work is added to DTP administration, fewer academics may be willing to take on the role of lead or coordinator – there is a risk of academic fatigue. Similarly, external partner organisations can be discouraged by the administrative costs of participating in a consortium, particularly charities, third sector and public organisations.

- **Employability, reputation and perceived value of a PhD**

Although much progress has been made over the last decade, there is still a need to make the value and transferability of skills gained during a programme more apparent to PGRs, supervisors and employers. This will help PGRs to market their doctoral experience and articulate their skills, bridging any gap between 'insider' and 'outsider' views of what a PhD is and its value. The PhD is generally not understood by most employers distant from HE; most do not actively seek out PhD graduates but would be happy to employ them if they have the right range of skills.

Some sense that the current system produces doctoral graduates who are at the same time both over-qualified and under-qualified in different respects (although most employers will not worry too much about overqualification). There is a need to be honest with PGRs about the labour market, particularly within academia. External mentors or supervisors are helpful in bringing more understanding of the labour market 'beyond academia'. Notably it can be as competitive to get into, for example, the museums and culture sector as it is into academia.

How should the sector be more honest about the 'value' of doctoral study in areas like fine arts, where there are few/no external jobs? Is the current system setting PGRs up to fail by training them in areas where there is no employment? This could be particularly pernicious where PGRs are self-funding.

There are clearly two tiers (or more) of PGRs – the funded who have far more opportunities for training and employability development and the unfunded who mostly don't. AHRC-

funded students constitute the highest tier and benefit most from the 'Matthew effect of accumulated advantage'. AHRC funding is seen as a badge of excellence and therefore holders may be more likely to secure an academic position.

In terms of future employability, the CDP model is seen by some to produce a new kind of researcher, who is conversant with both research and practice. This should be particularly relevant to the GLAM sector, as an example, where it is thought that in future, all research roles will not be purely research but also require interface with the public and include other kinds of work.

#### *A4.3.5 External factors and how they will change*

Roundtable participants expected there will be further curbs to the arts and culture sectors as a result of lower public funding. They also expect that in future a higher proportion of A&H doctoral graduates will work outside HE. This reinforces the need for PhD training to be at least partly designed to support professional development and/or practice-based.

More generally, outside HE, it is expected that more people will work part-time and so there will need to be more doctoral models that cater for people in those circumstances, presumably more flexible, part-time models. It is anticipated that '9-5' work will be less common, which will leave more time for leisure and potentially this could increase overall levels of interest in A&H / creative industries.

There are fears that some A&H departments will close, due to continued decline in UG student numbers which may fall below the level of sustainability, such as in language subjects. Some of those disciplines will resultingly have very few PGRs in future.

There is expected to be more regular cross-over between academia and other sectors as working patterns become more fluid – no jobs for life, more job and sector mobility and more portfolio working, already more common in the A&H than in other disciplines. Lifelong learning and career change will become more common.

Much of the recent shift to online working, due to the pandemic, will continue for economic reasons. Collaborative work at distance will become the norm – much supervision is currently 'remote' even within a single HE institution. This brings into question whether partnerships (such as a DTP) need to be geographically based. It could open up opportunities for more interest- (or specialism-) based partnerships or clusters, rather than partnerships being locality-based.

AI and data technologies will be more widespread. The tech sector is currently a largely untapped area for A&H researchers; it is only just beginning to recognise their potential. Much more needs to be done to engage A&H researchers in tech-related interdisciplinary research, although many A&H UG students in the pipeline do not have adequate training to take up these opportunities.

It is posited that the boundaries between Research Councils will need to become more permeable as the extent of and need for interdisciplinary collaborations and team science increases. More structures (and funding) will have to become more flexible.

The need for public engagement and focus on the impact of any research will increase. Engaging with society (and research users) will need to be core to doctoral research rather than seen as an additional dissemination activity for research outcomes.

A&H research will need to pivot in order to play its part in tackling society's grand challenges and to ensure that it is not excluded. A&H researchers are well placed to develop and provide some of the more creative approaches that will be needed to solve them.

Geopolitically, the locus of power is shifting (east) which will influence the mobility flows of researchers and prospective PGRs, and where collaborative opportunities may lie. More self-funded PhDs may come from overseas (as well as more funded by their governments). Participants have noted, and generally welcome, the shift by UKRI to allow funding of international PGRs.

There will be increased emphasis on the HE research culture, such as more focus on research integrity, about inclusiveness and about who is valued/rewarded. Wellbeing and mental health issues are here to stay and could be more prominent still in future, particularly for PGRs and academics. Schoolchildren – and undergraduates – currently have a stronger sense of fairness and value sustainability more highly than previous generations, which may influence their future interest in research and research topics. Those who enter doctoral study in 2032 (if straight from a degree) will have experienced a Covid-impacted childhood/education and may have different skills/expectations in relation to communication, learning and organisation compared with previous generations.

#### *A4.3.6 Future skills needs*

There was acceptance that many sectors will require 'T-shaped people' more and more, i.e. with a deep specialism in research (the vertical part of the T) but also a range of complementary skills (the horizontal part of the T). The expectation is that as funding into a sector such as galleries, libraries and museums drops further, staff who currently undertake research or highly skilled roles will need also to be able to work in a wider range of roles. Doctoral graduates will need to be more multi-faceted; it will no longer be sufficient to be just a subject expert but researchers will be required to understand broader contexts and have skills in public engagement, raising funds, and commercial understanding. Museums and similar entities are becoming more open and democratic. Difficult conversations about equality and de-colonisation will have to be navigated – including in areas like fine arts.

There will be much more focus on working in teams: A&H needs to work out how to provide development of this competency in subjects where research is predominantly a sole endeavour.

There was a variety of interpretation about what 'Digital humanities' means, i.e. whether it is a discipline or whether it refers to digital techniques within existing disciplines. The general view is that in some areas it may become a substantial segment of research. The UK needs to build capacity in digital humanities and work proactively to be at the technical forefront of digital training (rather than leaving this to existing academics to try to plug gaps in teaching). The UK is lagging behind other countries in building digital expertise. Current capability is unevenly distributed and in short supply – AHRC should lead on national capacity-building in this area.

A&H will need to learn to look through the lens of innovation/business-led research, and enhance the development of innovation skills. Greater levels of creativity are sought in many industrial sectors, so A&H doctoral graduates could have roles to support this.

As more A&H researchers work collaboratively with other research disciplines, more grant funding will become available to A&H researchers, so they will need to develop more finely-honed skills to apply for those grants.

Skills that were anticipated to grow in importance in the future (some of which A&H PGRs could be particularly adept at developing) included:

- More creativity – ability to ‘think outside the box’ and take controlled risks
- Resilience, self-sufficiency but also kindness, supporting others;
- Being nimble / agile;
- Decision-making;
- Quantitative research methods;
- Project management, budgeting and finance;
- How to articulate skills to others and translate experiences to new environments;
- Dealing with ambiguity;
- How to work within a diverse society – intercultural competence;
- Working as part of a team - knowing where and how to fit in;
- Being able to switch theoretical frames including subjective and objective approaches, i.e. being able to ‘pivot’ / change mindset;
- Intellectual property skills – e.g. understanding the impact of 2039 in copyright legislation;
- Digital humanities.

Several participants anticipated a need for hubs, centres or networks that could provide specialised skill development, as individual DTPs or institutions would not be able to provide training (or in some cases research facilities) to cater for all skills requirements.

#### *A4.3.7 Potential and/or desired future roles for AHRC*

Many participants felt that those in A&H do not currently do a good job in promoting what A&H subjects (and researchers) contribute to economy and society. There is a feeling that AHRC needs to lead on this and be the advocate for A&H (research). There was a sense that AHRC and A&H need to be more ambitious and become driving forces in research and wider society.

While UKRI has a stewardship responsibility for the entire HE research system, it is assumed that AHRC has this role for research in the A&H subjects.

There was ubiquitous opinion that AHRC should remain a funder (of PGRs). Although it only funds 1 in 6 A&H PGRs, it is still the largest funder. It also funds quite a high proportion of all full-time PGRs. As such it should lay out the broad direction of travel for A&H doctoral education. That said, many felt it should retain its current position of trying to be flexible and playing a facilitating role, i.e. being reasonably hands-off and allowing HE institutions to adapt models to the markets they work with.

If the total amount of funding of PGRs cannot be increased, there needs to be a balance between an appropriate level of funding for individuals (that is sustainable) and aspirations to broaden access. Some currently under-represented groups will need more flexible funding options than current models, if they are to participate.

If the current widespread requirement for prior Masters study is maintained, AHRC is likely to have to adjust the balance of its funding more towards support for Masters study (i.e. to enable a more diverse pipeline to doctoral study).

The requirement within collaborative models for matched funding from industry is likely not to be sustainable, especially for SMEs and smaller RPOs. AHRC may need to be able to be more flexible in its approaches to funding, e.g. providing discretionary pots that different bodies could apply for.

AHRC should build stronger relationships with employers at the national level, potentially performing a brokerage role. Current employer engagement by individual HE institutions duplicates a lot of effort in institutions and is highly inefficient for the employer.

AHRC should play a leadership role in relation to EDI in A&H. It should overtly provide some support to those who pioneer more inclusive application/selection processes for doctoral study. Institutions within DTP programme are currently unsure of what freedom they have for experimentation in this area, so AHRC should provide guidelines/parameters in which they can work.

#### *A4.3.8 Preliminary thoughts about potential future doctoral models*

A number of the issues raised were outside the scope we interpreted for this project, many of which may also be raised in parallel during the 'new deal for postgraduate research' consultations. Given the broad scope and duration of that consultation, and that we assume this report may be an input to it, we include some of these issues briefly here.

Three years is increasingly seen as unrealistic as a length of doctoral funding/programme, given the accepted aspirations for more focus on the development of the PGR. Many participants felt it was necessary to extend programme duration to 4 years, including 6-12 months spent on professional development opportunities and activities. There were also suggestions that some of this time be allocated specifically for professional development activities (some of which could be post-submission of thesis) to support better transitions into employment.

The current funding and structures are not accelerating increases in diversity in the AHRC-funded doctoral population. The lack of access to funded Masters, compounded by undergraduate debt, is a serious disincentive to doctoral study for those without alternative means of support. Stipends need to be sufficient for PGRs 'to study and live', not to have to take decisions between paying rent and eating. This is particularly acute for those with caring responsibilities; access to an additional pot of support funding would improve diversity.

There needs to be more flexibility in the mode of delivery – potentially a continuum rather than the current bifurcation between FT and PT. As a minimum PGRs need to have the ability to change their mode of study more than once as their circumstances change.

There need to be more options so a more diverse range of students can undertake doctoral study, including returners/professionals; this requires more flexible models that can be combined with continuing work/practice, and more differentiated or personalised training opportunities that suit those with different starting points.

There could be opportunity for A&H PGRs to be trained within large research projects/grants that will be valuable in building interdisciplinary capacity and team experience, which could

be on interdisciplinary (cross-Council) research themes. This could introduce PGRs to team science approaches to research and raise the profile of the value of A&H in tackling complex problems / global challenges. Common projects/challenges tackled by a 'team' of A&H PGRs with different disciplinary backgrounds would be valuable in existing models too.

There could also be value in UK/national discipline-based DTPs or similar to stabilise and enrich specific/threatened disciplines and leverage remote centres of excellence.

AHRC needs to find an equitable way to remove the current two-tier provision within institutions, so that the experience/opportunity gap between AHRC-funded PGRs and others, predominantly self-funded, is removed or at least lessened. While AHRC-funded programmes should be the gold standard, levelling up of other doctoral programmes and self-funded study by opening up access is also needed.