FIFTH ANNUAL

King's College London

Researcher Education & Development

CONFERENCE

October 18th 2019

http://bit.ly/REDS2019   #redsCONF2019   @REDSconf

Career Identity and Possible Future Selves
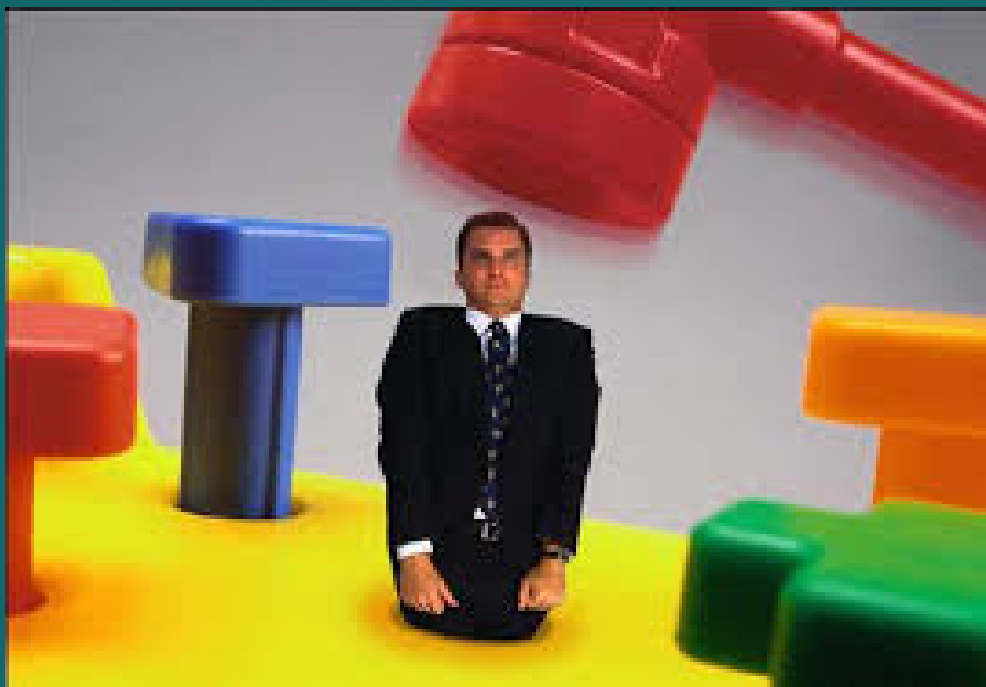
Julia Yates, PhD, CPsychol

Programme Director, MSc Organisational Psychology

City, University of London

Career identity

"Who I am and who I could become"
(McMahon & Patton, 2014)

'Who do I want to be?'
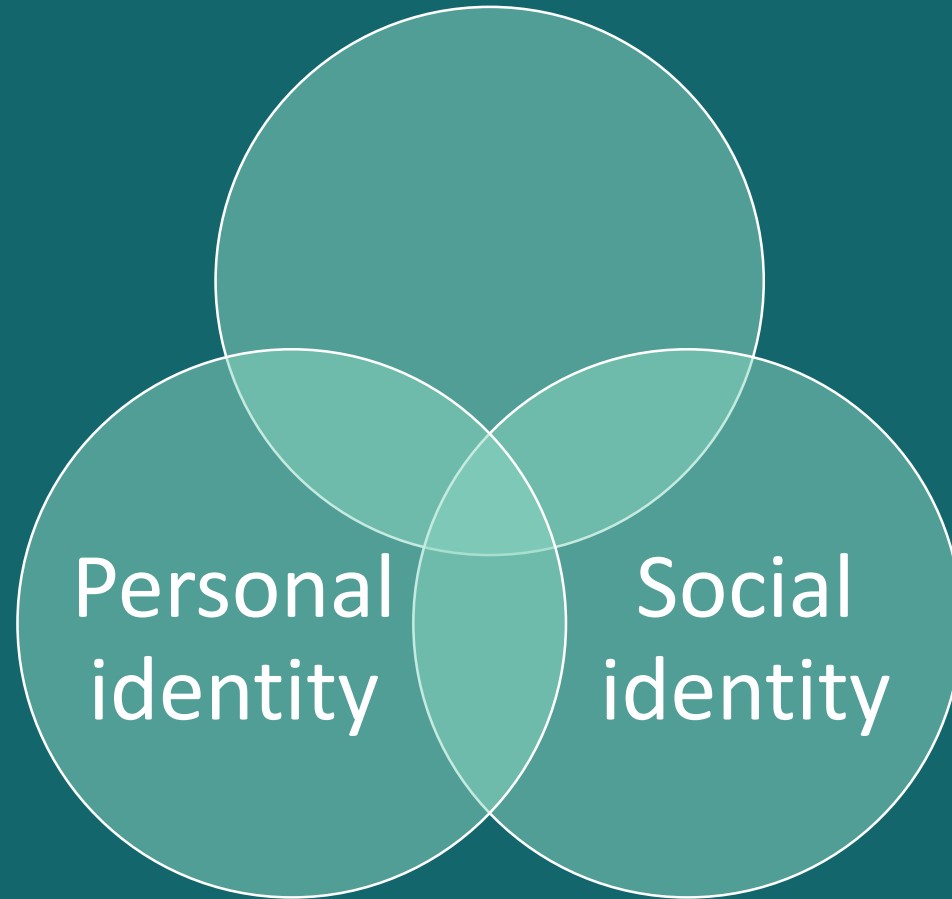
'What do I want to do?'

Career Identity

Career Identity

The Occupational Identity of Researchers

What characterises them?

What do they have in common?

What do they think about themselves as a group?

What matters to them?

Possible Future Selves

Possible Selves

"Stories we tell ourselves about ourselves in a hypothetical future situation"

(Erikson 2007)

We can all have multiple possible selves: hoped for, feared or expected
Entails pre-experiencing

(Markus & Nurius 1986)

Possible selves and career conversations

- Possible selves allow us to evaluate current selves

- They help us to set goals

- The allow us to identify the steps we need to take

- They motivate us to keep working towards our goals

Strauss, Griffin & Parker 2013

A little bit of theory

Goal setting theory

Images and emotion

Future time perspective

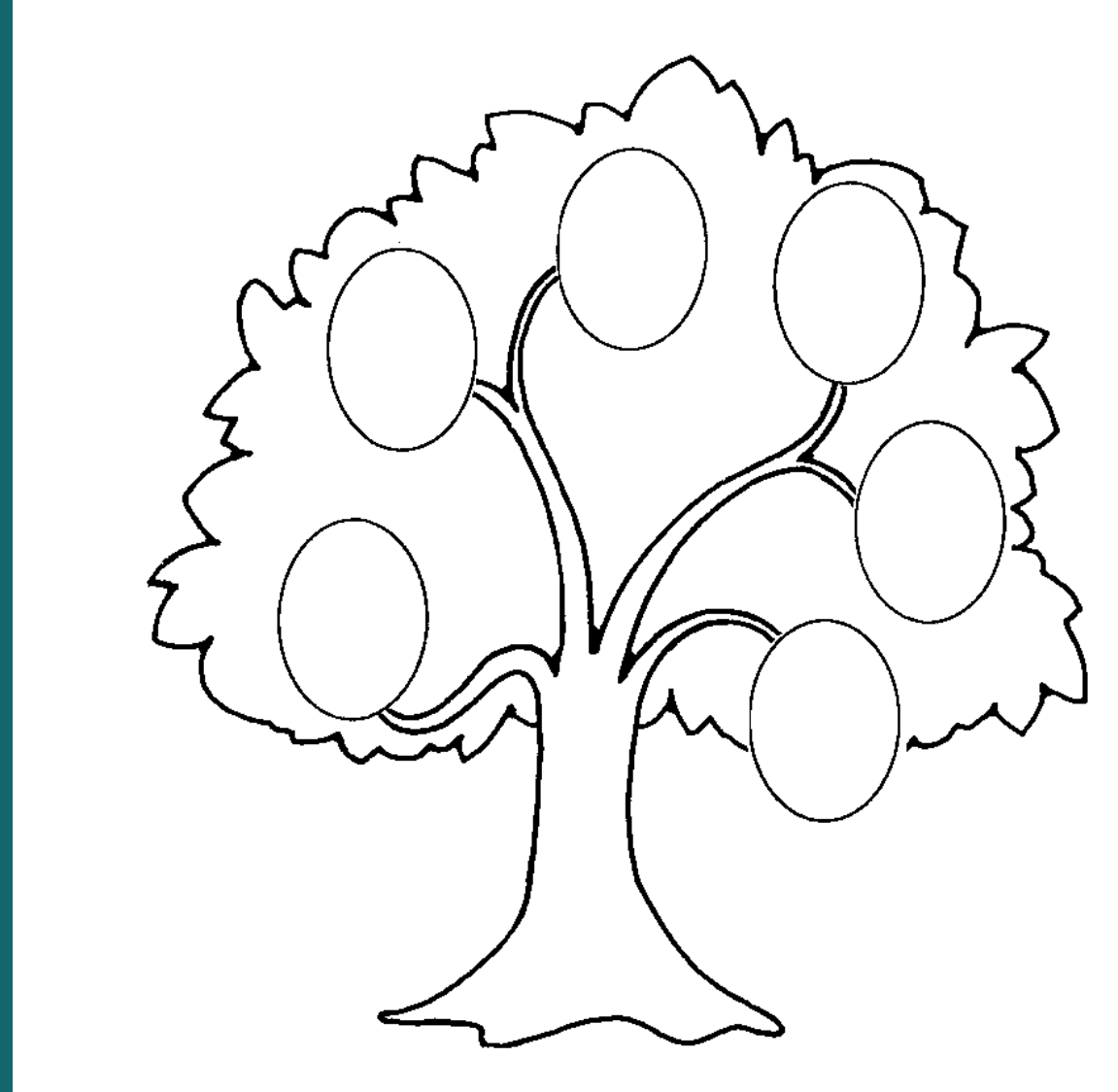# Possible selves interventions

One to ones or groups

Visualisation and narrative

As much detail as possible

A possible selves intervention

Who could I be?

A possible selves intervention

- Picture in your mind's eye, yourself in two years time, working as a …
- Where are you working? What's the atmosphere like?
- Who are you working with? What are your relationships like?
- When you arrive in the morning, what's the first thing you do? What's next?
- What do you wear to work?
- How do feel about going into work in the mornings?
- When you tell people what you do, how do you feel?
- What are your weekends like these days?
- What do your family think about your new job?
- What is the thing that's most different from your current you?

Help each other to describe your possible selves

As listener, your job is to encourage your partner to describe their possible selves vividly

When you finish, ask them what they need to do next

Thank you

Enjoy the day

Julia.yates.1@city.ac.uk

References

Erikson, M. G. (2007). The meaning of the future: Toward a more specific definition of possible selves. *Review of General Psychology, 11*(4), 348-358.

Markus, H., & Nurius, P. (1986). Possible selves. *American psychologist, 41*(9), 954.

Patton, W., & McMahon, M. (2014). *Career development and systems theory: Connecting theory and practice* (Vol. 2). Springer.

Strauss, K., Griffin, M. A., & Parker, S. K. (2012). Future work selves: How salient hoped-for identities motivate proactive career behaviors. *Journal of applied psychology, 97*(3), 580.

FIFTH
ANNUAL

KING'S *College* LONDON

Researcher Education &
Development
CONFERENCE

October
18th
2019

http://bit.ly/REDS2019   #redsCONF2019   @REDSconf

Agency in Careers Guidance

DONALD LUSH

CAREERS CONSULTANT FOR RESEARCH STAFF AND STUDENTS

KING'S COLLEGE LONDON

What do I say I do?

I help people think about and plan for their professional lives and then help them execute their plans

Agency is central to my work

Agent

An entity, usually a person, that is capable of deliberation and action on that deliberation

What I am trying to do today?

I'm sceptical about this sense of agency. I think it's resting on shaky foundations

This comes from my interest in philosophy as applied to careers work

Agency requires four things

Freedom

A subject

A decision

Causation

Hannah Arendt
'On Freedom'

Arendt's essay suggests that freedom may be an incoherent idea. She talks about the paradox of 'freedom to become unfree'

The freedom we exercise in career thinking and planning must be about putting limits around what we do, committing to some things and rejecting others

Arthur Schopenhauer

In his essay on 'Free Will' Schopenhauer says that political freedom is the freedom to live under rules to which we freely give our assent

The individual subject

There must be a subject to have this (paradoxical) freedom and to make decisions about what to do with it and then act on those decisions

The individual

In the modern western world, our sense of individuality comes from our religious heritage

This tells us we have souls for which we are individually responsible and accountable and are rewarded or punished according to our thoughts and actions

Although we now live in a more secular world this sense still exists and exerts a powerful attraction

The individual

Nick Chater
Gilbert Ryle
Arthur Schopenhauer

In philosophy, it lives on in Descartes *'Cogito Ergo Sum'* – I think therefore I am. This is one of the most criticised ideas in all of western philosophy yet still has tremendous power

Other philosophical traditions and feminist philosophy take different perspectives

Some neuro-philosophy argues that we have no hidden depths or permanent essence and that our smooth sense of individuality and reality is a moment to moment improvisation of the brain as it tries to make sense of all the data bombarding it

The individual subject

There is no sense of us as individuals that cannot be rationally and effectively contested

Decision making

Decision theory is concerned with the reasoning underlying an agent's choices, whether this is a mundane choice between taking the bus or getting a taxi, or a more far-reaching choice about whether to pursue a demanding political career … Standard thinking is that what an agent does on any given occasion is completely determined by her beliefs and desires/values, but this is not uncontroversial… decision theory is as much a theory of beliefs, desires and other relevant attitudes as it is a theory of choice; what matters is how these various attitudes (call them "preference attitudes") cohere together… The key issue in this regard is the treatment of uncertainty.'

Decision making

(from the Stanford Encyclopaedia of Philosophy)

This all rings bells in careers work. It feels like what we do

But (as Schopenhauer would ask) can we will what we will? Do we choose our desires?

Derek Parfit

Reasons and Persons

'Like my cat I often simply do what I want to do'

'I believe that most of us have false beliefs about our own nature, and our identity over time, and that, when we see the truth, we ought to change some of our beliefs about what we have reason to do.'

Parfit argues that people can (and do) rationally decide to act against their own interests and that our everyday sense of ourselves is wrong, particularly in the way it doesn't take enough account of time

David Hume
Causation

Our clients often ask for and hope we can tell them that careers decision or action A entails consequences B, C and D

Causation has never been observed and is not required to account for the apparent predictability of the world

Hume instead argues that what we see as causation is our minds identifying patterns on which we base predictions

He was also dismissive of humans having a coherent and persistent selfhood

So…….

None of the things I said we require for agency seem to exist in the way we often think they do

The implications are potentially devastating

I find what I do valuable and my clients say they do too

I think I might be asking the wrong questions if I am not getting helpful answers

So…….

It turns out I have been asking metaphysical questions – ones about the big issues of reality

These types of questions are not easily susceptible to empirical enquiry and are often very frustrating

For example, the *Stanford Encyclopaedia* says causation may be 'anomic' (not subject to the laws of nature)

What questions should I be asking if I want more meaningful answers?

Is careers guidance a form of moral dialogue?

Aristotle said that one should act across your whole life for a purpose, as a member of a community and for the benefit of that community

Buddhists are obliged to avoid occupations that do harm

Is asking what good means a way forward?

Further reading?

Gitta Sereny: *Albert Speer, His Battle with Truth*

Hannah Arendt: *Eichmann in Jerusalem*

Horrifying case studies of careers conducted without effective critical consideration of what good means for individuals and groups

Thank you!

Find me on Linked In

donald.lush@kcl.ac.uk

Twitter: @kcldo1thing
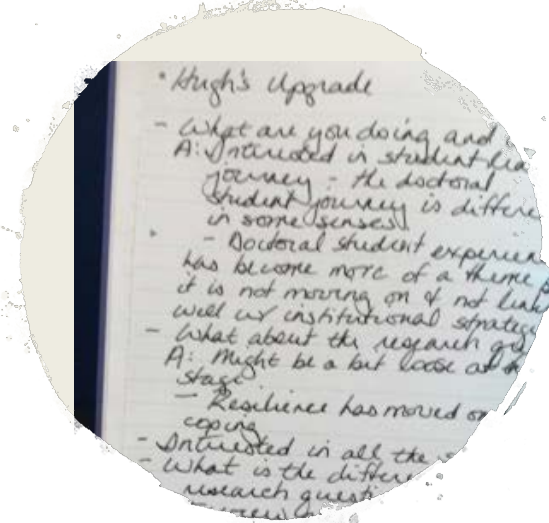
Desired in theory, troubling in practice

The becoming and identity development of the
social science PhD student

Hugh Kilmister

What do we know about the PhD student experience?

Increased attention over the last twenty years on the purpose and value of the qualification

Over-supply of PhD graduates;
The lack of preparation and skills development for careers beyond the university;
The lack of appropriate supervision
Student adjustment and adaptation to the research environment;
The supervisory experience;
The barriers to progression;
The continuing high levels of student drop out

(Golde, 2005; Wellington et al, 2005; Nyquist and Wulff, 2008; McAlpine et al, 2012; Acker & Haque, 2014 and Leijen et al, 2016).

Continue to have a limited understanding of the lived experience of the PhD student

Various conceptualisations have been used to examine the PhD student experience

Socialisation - process through which the individual acquires the knowledge and skills, the values and attitudes, and the habits and modes of thought of the society to which he/she belongs (Bragg, 1976; Weidman et al, 2001)

Research skills development reflecting a general neoliberal approach in higher education (Deem, 2011; Tight, 2014 and Thornton, 2017)

The field of PhD study remains under-theorised and that much of the research that has been undertaken lacks a guiding theoretical framework (Leonard et al, 2006; Peterson, 2007 and McAlpine et al, 2012)

More recently the PhD student experience has begun to be conceptualised as a process of identity development (McAlpine et al, 2014; Keefer, 2015 and Mantai , 2017)

Lines to map identity development and becoming

Deleuze (2007) asserts that as individuals '**we are made up of lines'.** In *A Thousand Plateaus* (1980) Deleuze & Guattari state that **are lives are composed of three types of lines:**

"a line of rigid and clear-cut segmentarity; a supple line of molecular segmentarity; and an abstract line , a line of flight"

Rigid lines are defined as being major components in our lives: our work, where we live, whether we are single or married. This line also includes transformations: leaving home, marriage or divorce, doing something new. Essentially the elements that make up the assemblage of our identity;

Supple lines are the constantly occurring minor and major changes and adaptations we make on a regular basis. So the athlete in training will adapt to the requirements of competition and in so doing their rigid body will 'break down' and become reshaped. Essentially supple lines loosen rigid lines;

Lines of flight are lines of creation, mutation or transformation. These are lines that provide a momentary escape, interruption or eruption. These can be impulsive lines that change things and can transform lives completely but have the danger of leading to rupture. Lines of flight in the educational setting can mean subversive and creative acts and the doing of something unexpected and they operate as change mechanisms through which 'becomings evolve' (Deleuze, 1995)

These lines operate in mixtures and in relation to one another and are thus interconnected.

Pilot study

In my pilot study I wanted to test the Deleuze & Guattari concept of these inter-connected lines with my participants by looking for the following: **instances of their rigid lines when participants drew on their existing identities particularly their professional identities; their supple lines showing the small changes and adaptations they made in relation to their PhD study; their flight lines of impulsive actions and subversive acts that affected their becoming and identity development**.

Pilot study with three participants. **A particular sample of participants who were over 30 and came to the PhD with well-developed professional identities.**

Rigid lines: Lisa

I am used to being a competent person, **a 'high achiever'.** *As I've grown older and worked I have learnt to manage multiple projects and the accompanying stress. I even worked full-time when doing a part-time Masters.* **I assumed that this meant doing a full-time PhD with no work commitments would be relatively straight-forward. The PhD felt like it could be a good fit for me as the kind of person I am and having worked in universities.**

I did not anticipate how **out of place I would feel from the beginning.** *From the beginning* **I have felt that I was going about my work the wrong way.** *I was reading the wrong things and writing (I was pushed by my supervisors to write from the beginning) the wrong things. I was told I wasn't doing enough work.*

Through **speaking to various different people outside the university,** *I've managed to come up with some strategies about how I might be able to take back some of that control.*

Supple lines: Malik

I was coming with over 10 years of experience at a tertiary level so I knew what I was researching on. **I thought I knew the PhD process and the relationship with the supervisor, about the nature of the work. I talked to people and I thought I was fully ready because I had done the homework..**

At some point the feedback wasn't that great. **I thought the supervisor was slightly harsh. Didn't mention what was great…only telling me what to improve but when I was doing it I wanted assurance at some point.**

So later on I thought about this and **I thought I hadn't communicated very well,** *so if I didn't understand them and if they weren't getting my point then* **I needed to ask a clarification question. I need to double-check things… I began to ask more questions in supervision meetings just to be sure this is what they are looking for and I was clear.** *So I made this a priority and after making this discovery things have got better.*

Flight lines: Rosie

*I grew up with all sorts of issues with schooling, **I was suspended from one school and then expelled from another school***

*I do feel as if I've had to **carve my own way** because there's been so little interest.*

*I really wasn't getting on with my supervisor and **things were going from bad to worse** and I felt like it couldn't continue, but I have found it so hard to tell people because the person is so well respected and so well-liked. I decided to discuss it with the Graduate Tutor and that's when everything kicked off big time and **it was a kind of hideous show down, with only one loser. I felt bullied and that is was my fault that things were not working out and that I should feel lucky to have this person as a supervisor.***

*And so, to go into a lively meeting with a bunch of people **who don't care a hoot about the PhD,** and who really only care about me in relation to being part of a campaign about which we all feel really strongly, is great.*

Conclusion

The value of inter-connected lines as a lens for taking account of the evolving nature of PhD student identity development and becoming;

The pilot study has begun to capture the views of mature students with a range of well-developed identities;

Supplements our knowledge about the impact of professional identities on those doing the PhD;

The prior perceptions of participants towards the PhD were at variance with the lived experience;

A sense of separation is important.

References

Acker, S. & Haque, E. (2014). The struggle to make sense of doctoral study. *Higher Education Research & Development*, 34(2), 229 – 241.

Bragg, A. K. (1976). *The socialization process in higher education*. Washington, DC: The American Association of Higher Education.

Deem, R. (1998). 'New managerialism' and higher education: The management of performances and cultures in universities in the United Kingdom. *International Studies in Sociology of Education*, 8(1), 47 – 70.

Deleuze, G. & Guattari, F. [1980] (1987). *A Thousand Plateaus. Capitalism and Schizophrenia*, trans. B. Massumi, London: Athlone.

Deleuze, G. [1990] (1995). *Negotiations* 1972–1990, trans. M. Joughin, New York: Columbia University Press.

Deleuze, G. & Parnet, C. (2007). *Dialogues.* New York: Columbia University Press.

Golde, C. M. (2005). The role of the department and discipline in doctoral student attrition: lessons from four departments. *The Journal of Higher Education*, 76, 669–700.

Keefer, J. (2015). Experiencing doctoral liminality as a conceptual threshold and how supervisors can use it. *Innovations in Education and Teaching International*, 52(1), 17 – 28.

Leijin, A., Lepp, L. and Remmik, M. (2016). Why did I drop out? Former students' recollections about their study process and factors related to leaving the doctoral studies. *Studies in Continuing Education*, 38(2), 129 – 144.

Leonard, D., Metcalfe, J., Becker, R. and Evans, J. (2006). *Review of literature on the impact of working context and support on the postgraduate research student learning experience*. London and Cambridge: Institute of Education and UK Grad Programme.

Mantai, L. (2017). Feeling like a researcher: experiences of early doctoral students in Australia. *Studies in Higher Education*, 42(4), 636 – 650.

McAlpine, L., Paulson, J., Gonsalves, A. and Jazvac-Martek, M. (2012). 'Untold' doctoral stories: can we move beyond cultural narratives of neglect? *Higher Education Research and Development*, 31(4), 511- 523.

McAlpine, L. & Amundsen, C. and Turner, G. (2014). Identity-trajectory: Reframing early career academic experience. *British Educational Research Journal*, 40, 952 – 969.

Nyquist, J. and Wulff, D.H. (2003). *Recommendations from national studies on doctoral education. In The Ph.D.: a tapestry of change for the 21st century.* Re-envisioning the PhD Project: University of Washington. Retrieved from www.grad.washington.edu/envision/resources/tapestry_recom.html (Accessed on 11/06/2018)

Petersen, E. B. (2007).Negotiating academicity: postgraduate research supervision as category boundary work. *Studies in Higher Education*, 32(4), 475 – 487.

Thornton, M. (ed.) (2015). *Through a Glass Darkly: The Social Sciences look at the Neoliberal University*. Canberra: ANU Press.

Tight, M. (2014). Collegiality and managerialism: a false dichotomy? Evidence from the higher education literature. *Tertiary Education and Management*, 20(4), 294 – 306.

Weidman, J., Twale, D., & Stein, E. (2001). *Socialization of graduate and professional students in higher education: A perilous passage?* ASHE-ERIC Higher Education Report, 28. San Francisco, CA: Jossey-Bass.

Wellington, J., Bathmaker, A.M., Hunt, C., McCulloch, G. & Sikes, P. (2005). *Succeeding with your doctorate*. London: Sage Publications.

FIFTH
ANNUAL

KING'S
College
LONDON

Researcher Education &
Development
CONFERENCE

October
18th
2019

http://bit.ly/REDS2019   #redsCONF2019   @REDSconf

Timely completion – a perennial problem?
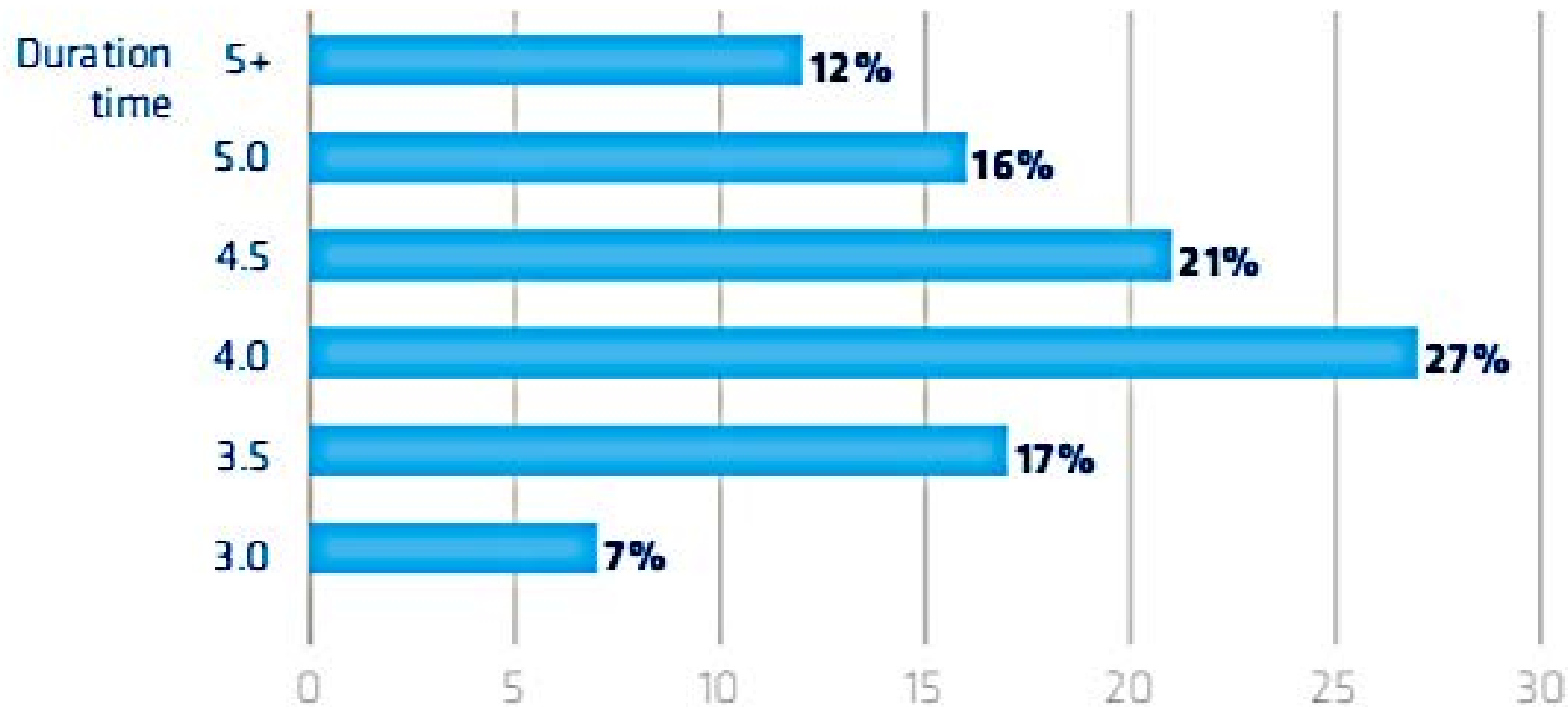
Source: Hasgall et al, 2019

What do we know about timely completion?

Level	Research foci
Doctoral researcher	• Sociodemographic and contextual academic factors • Affect, meaning and self-efficacy • Work-life balance
Supervision	• Supervisory style • Intervention vs autonomy • Relationship fit
Department & discipline	• Academic socialisation • Access to research communities
Institution	• Structural reforms to doctoral programmes
Society and supra-society	• Performativity

Research question:

How do doctoral researchers exercise agency to make the most of their doctorate and still complete on time?

Epistemic-oriented agency

I know people that don't really have to think about what they're doing and just do X, Y and Z because they've been told to do. But at least I have to think about what I was doing a bit and everything I've done experimentally, I can justify as why I've done it. Because like I thought about doing it

PGR11-CHEM

Self efficacy-oriented agency

these days doing a PhD...involves doing a lot of activities outside the PhD of all different kinds, from teaching to publication and even placements. So they have to be incredibly organised, they have to have that ability to organise their time, time management, I hate that phrase, but organising their time in the most productive sort of way, which isn't at the detriment to the core of what they're doing, which is the PhD.

SUP08-HumSoc

Relational agency

I've got better at manipulating their strengths and weaknesses...I know things that she'll do and he'll do, and I try to play that to my advantage...it sounds bad really. I know that he ...doesn't take as much kind of detailed interest. If you ask him something he'll be like, 'yeah, that's fine'. Whereas she'll go into depth, looking at things. So if I need like funding to go to a conference I usually go to him because he'll just sign off the form without reading

PGR07-HumSoc

Passive agency

So we were in a seminar, the guy who we want to do the statistical analysis is right there in front of us giving the talk. She's sitting in the front row. All you have to do is go up to him afterwards...We got to the end of the seminar, out of there like a flash. I'm thinking what? So then when I saw her later on and I said you know that doctor so and so was at the thing and you could've asked him 'oh yeah I forgot'. What are you forgetting? The guy's giving a seminar about statistics and that's where you're stuck in your project and you forgot
SUP02-MED

Concluding thoughts

- Understand agency, understand progress

- Multiple forms of agency in the doctorate

- Content and agency to inform support structures

FIFTH ANNUAL

King's College London

Researcher Education & Development CONFERENCE

October 18th 2019

http://bit.ly/REDS2019   #redsCONF2019   @REDSconf

OVERVIEW

- Introductions, background and methods

- Theme: Individualism vs Collectivism

- Recommendations

- Questions and discussion

BACKGROUND

- Gender inequality in academia persists at senior levels
  (Morley 2014; Dean et al 2009; White et al 2011; Doherty & Manfredi 2006)

- Research has tended to neglect women at mid-career stage

- Funding from Leadership Foundation for Higher Education (Small Development Project)

- Research framework: the 'prestige economy'

PRESTIGE ECONOMY

Blackmore, P. & Kandiko, C. B. (2011). Motivation in academic life: A prestige economy. *Research in Post-Compulsory Education, 16*(4), 399-411.
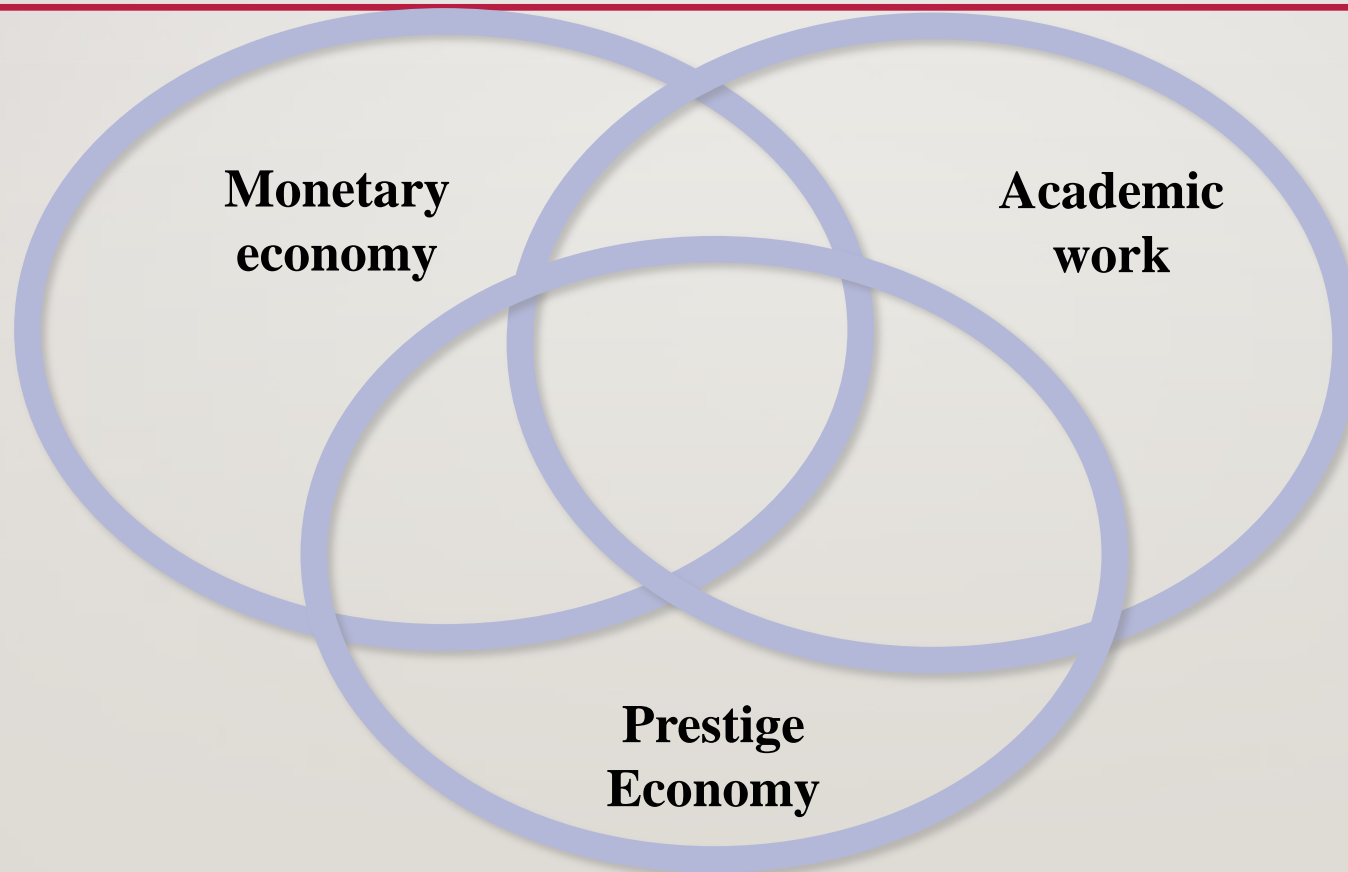
Features of academic prestige

- Large research grants

- Publications and citations

- Keynotes; Leading disciplinary / professional groups

- Expert status on reviews and other panels

- External examining (doctoral level)

- Awards

- Chairs and large offices and fancy titles

PRESTIGE AS A GENDERED CONCEPT

Academic women find it harder to access the types of 'currency' that advance their careers: publication rates, first author status and workload balance (Coate & Kandiko Howson, 2014)

Intersectional approach: multiple and intersecting spheres of 'difference', including culture, ethnicity, gender, disability, socio-economic status and language interact.

METHODS

- Interviewed 30 academic women from London institutions

- Self-identified as mid-career

- Range of disciplines and job roles

- Semi-structured concept-map mediated interviews- started with concept maps of career plans in next 5-10 years (Kandiko & Kinchin 2012, 2013)
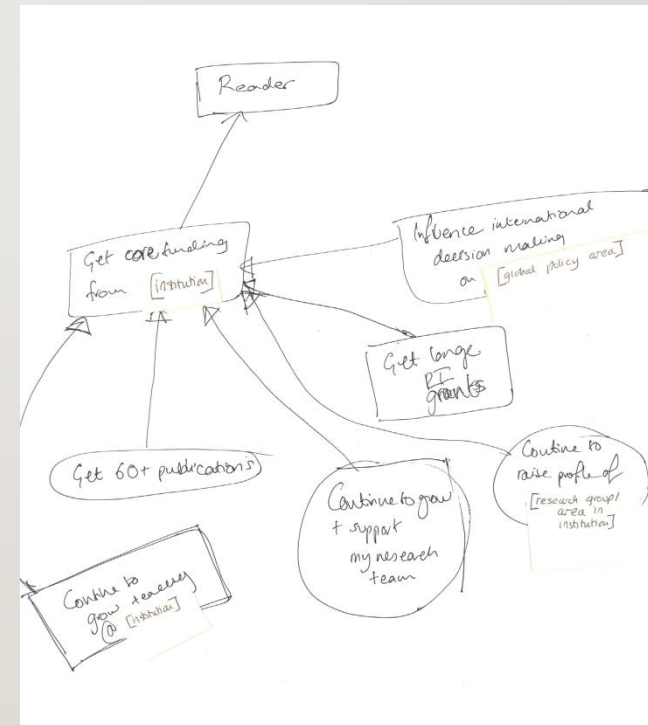
FINDINGS

- The neglected (and lengthy) mid-career stage

- Career planning: strategies and opportunities

- Gendered patterns of motivation and prestige

- Children, caring and work-life balance

GENDERED MOTIVATION AND PRESTIGE

- Academic women spoke of game-playing to access KPIs and indicators of esteem (e.g. publications, invitations, recognition)

- Academic men seem to use prestige to gain greater prestige, but at the expense of others

- Academic women less comfortable engaging in self-promotion and communicating their successes

- What women valued contrasted at times with what they perceived as being prestigious or highly valued by their departments, institutions and academic fields

CONTEMPORARY ACADEMIC LIFE

- 'Metrification' of academic work
    - "relentless focus on performance, competition and achievement"

    (David, 2014)

- New managerialism and 'Leaderist turn'

    (Morley, 2013)

ACADEMIC PERFORMANCE: INDIVIDUALISM VS COLLECTIVISM

"Men and women who do the same things, **the men accrue prestige and the women don't.** So writing books... sitting on advisory committees... to give plenary talks at conferences... getting large grants... The men who get those things get more prestige than the women who have done exactly the same ... **I'm increasingly invited to do quite high profile things. I don't think anyone in my department's noticed**". (Eve)

"I do recognise that people who… have more of an **individualist focus and put more of themselves into pursuing their career probably get further,** not to say that they get more job satisfaction out of it but probably get further and I think there's a spectrum of attitude there and I suspect very much that that may be **gendered** but I think it's based on sort of self **confidence issues** there as well." (Bernadette)
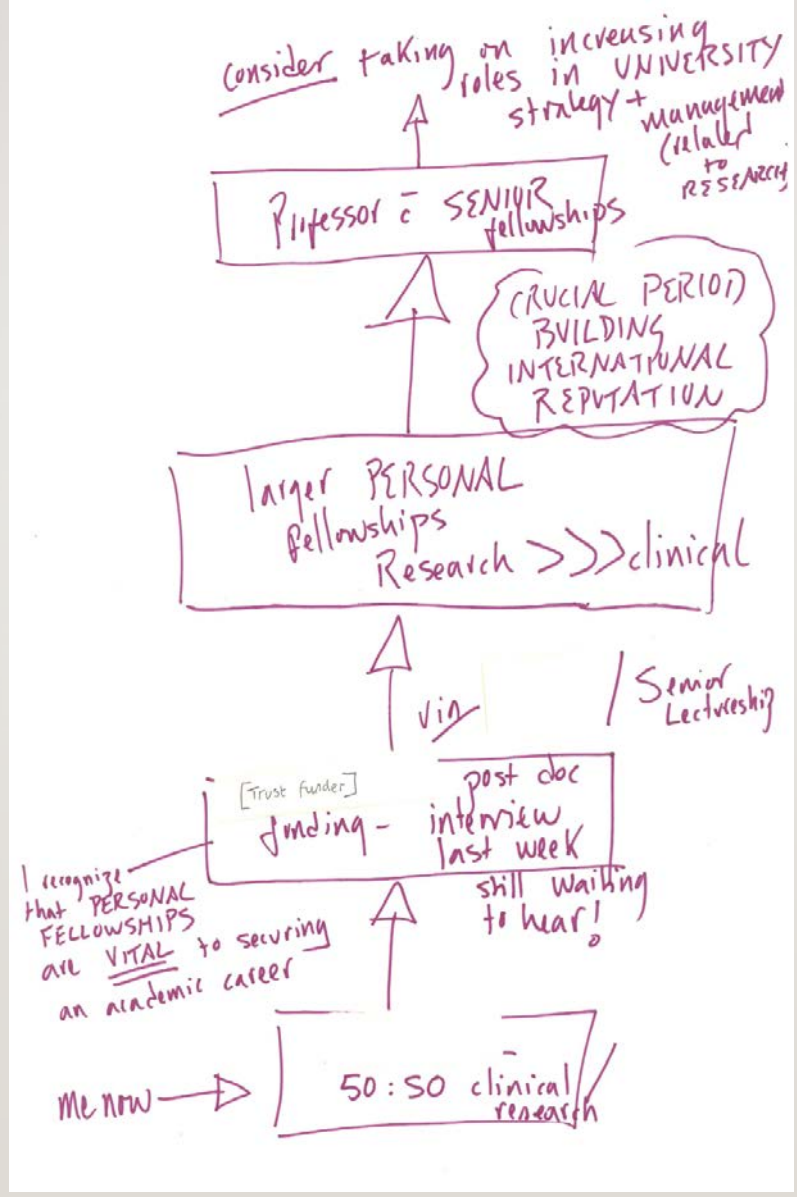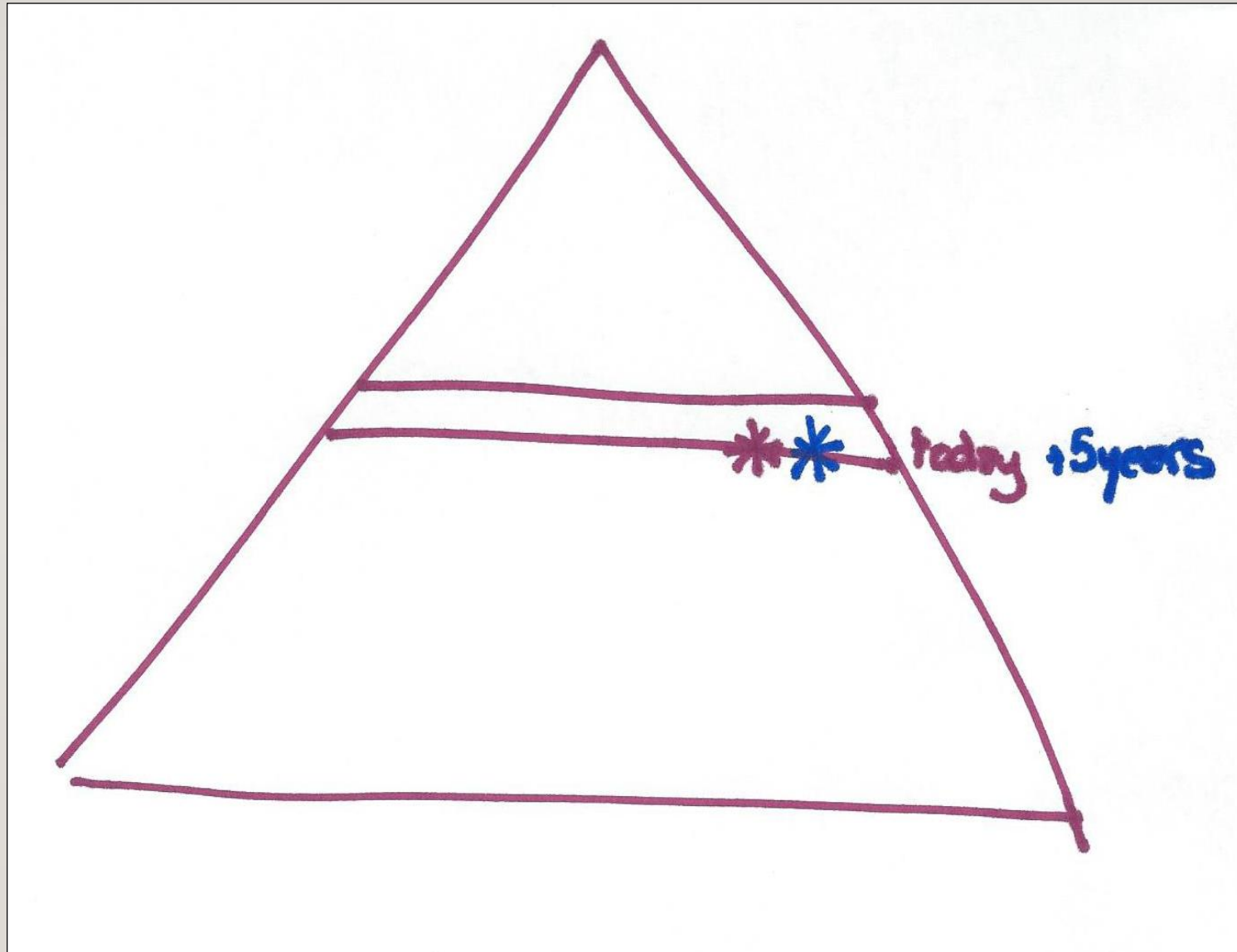
CONCLUSIONS

- Support for mid-career women's career development

- Valuing mid-career academic women

- Prestige: Setting indicators of esteem and rewarding what matters

- Strengthening flexible working practices

RECOMMENDATIONS 1

- Recognising and rewarding collective activities and success, not solely individual achievements

- Consideration of workload balance amongst individuals and teams, and the gendered division of activities

- Awareness of gender throughout decision-making processes

- Fostering a departmental culture which values individuals at all stages of careers

RECOMMENDATIONS 2

- Targeted institutional and research support for the mid-career stage

- Proactive support and development that is not only promotion-focused

- Proactive assessments of readiness for promotion.

THANK YOU!

- Camille B. Kandiko Howson, Kelly Coate & Tania de St Croix (2017): Mid- career academic women and the prestige economy, *Higher Education Research & Development*, DOI: 10.1080/07294360.2017.1411337

FIFTH ANNUAL

KING'S College LONDON

Researcher Education & Development CONFERENCE

October 18th 2019

http://bit.ly/REDS2019   #redsCONF2019   @REDSconf

Session 1: Agency & Identity
Ideas for discussion

- Identity perceptions

- Perception of self

- Identity development

FIFTH ANNUAL

KING'S College LONDON

Researcher Education & Development CONFERENCE

October 18th 2019

http://bit.ly/REDS2019   #redsCONF2019   @REDSconf

Graduate professional development with net positive revenue for your university.

Ask us to run the figures for you.

- **Personalized websites**
- **Webinars**
- **Groups**
- **Badges & Certificates**
- **Video Snippets**
- **Opt-ins**
- Android & iOS apps

Masters and Doctoral students access a full suite of services across the following ten topic areas:

- Academic Writing
- Critical Thinking
- Argumentation
- Research Design
- Thesis Design
- Job Prep
- Graduation Prep
- Getting Published
- Academic Hacks & Tools
- Wellness

These student defined "tags" were from search history and reflect s

Students Vote with Their Attendance: Making Digital Postgraduate Professional Development Meaningful to Students & the University

Provide PD.Education from D

DOCTORAL & MASTERS NET
Advancing Graduate Support

E. Alana James, ED.D.
DoctoralNet

The Voices of Students: Poignant Feelings & Stories

You can ask any question or answer this one: What incidents on campus or in grad school make you nervous?

Feeling like everyone around me understands what is going on and while I feel dumb and behind. ✕

♥ 3

Feeling helpless when your asked to do something you have never done before with little insight on how to do it. ✕

♥ 2

Doing research in a field I have little background in and feeling behind the rest of my peers ✕

♥ 1

Not able to answer the questions raised by my PI and feeling left behind by my peers ✕

♥ 1

Doing research in a field I have little background in and feeling behind the rest of my peers ✕

Students Vote with their Attendance:
Making Digital Postgraduate Professional Development Meaningful to Students and the University

User Experience

Design

Hypotheses

1. Support structures for postgraduate students or early career researchers **need to be redesigned**

2. If we do that well, filling known gaps, we will see less anxiety, greater ease in students pursuing a variety of careers and an increase in retention and completion

3. The Learning & Development training industry has much to teach us

Doctoral Students Adoption Choices

E. Alana James, ED.D.
DoctoralNet

DOCTORAL & MASTERS NET
Advancing Graduate Support

Current Population Autumn 2019

- 60K Masters and Doctoral students
- @ 14 universities , frequently Carnegie classed as high/very high levels of research
- Middle East, Ireland and the United States.

E. Alana James, ED.D.
DoctoralNet

DOCTORAL & MASTERS NET
Advancing Graduate Support

Does Support Need to be Redesigned?

And if so, in what ways?

E. Alana James, ED.D.
DoctoralNet

Doctoral Students Adoption Choices

Ambiguity

31.5% red

Skill
Development
Needed

19% red

Gardner, S. (2007, 2008, 2009, 2010)

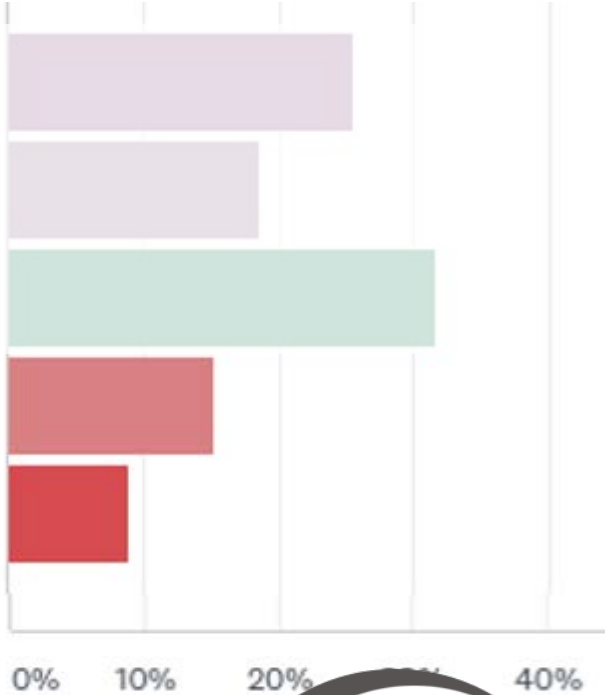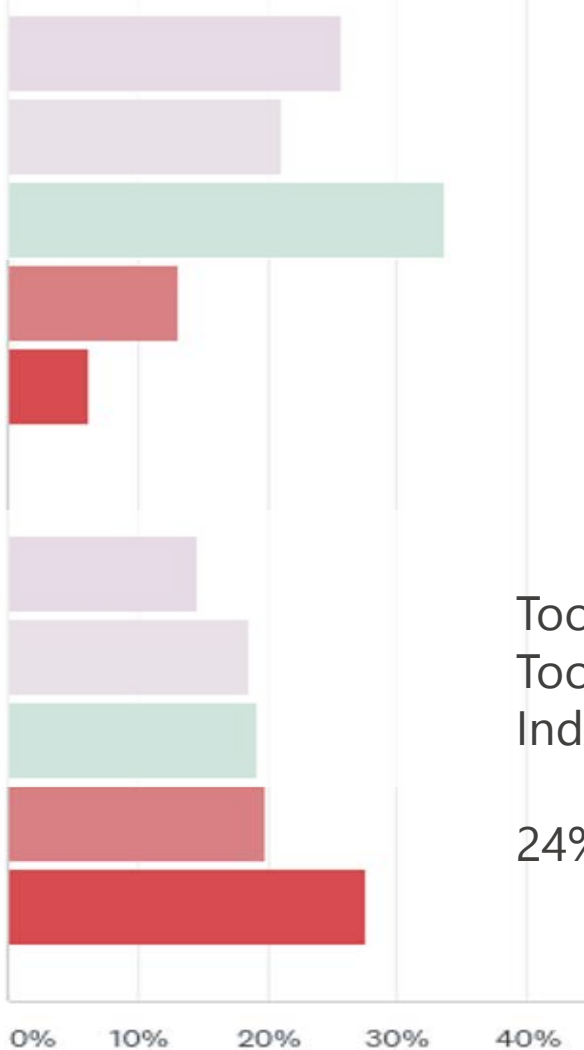54% of this sample reported they had seriously considered dropping out

Work-Life
Balance

57% red

Not Enough
Support

48% red

Too much or
Too Little
Independence

24% red

Seldom if ever (less that three instances you can think of).

Occasionally (happened once a semester or more).

Sometimes (a few instances during a semester when you felt this to be an issue).

Frequently (this challenge was frequent enough to affect my feelings about my gradu...

A problem area (this challenge caused my graduate work to slow down or stop).

DOCTORAL & MASTERS NET
Advancing Graduate Support
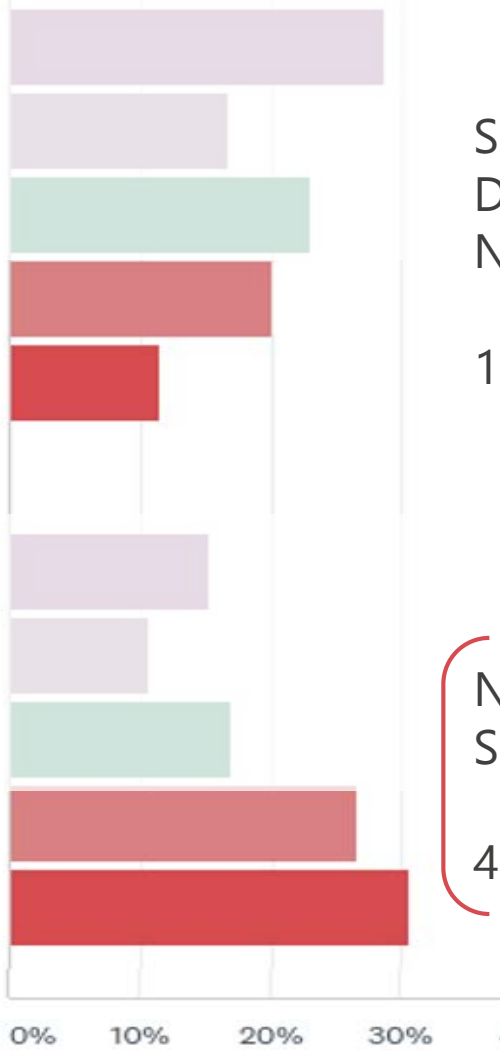
E. Alana James, ED.D.
DoctoralNet

Two Basic Questions

Digital implementation is not inexpensive – when we build it...

1. Do they use it?
    1. What do they use?
    2. Do they find it useful? In what ways?

2. Are we meeting the needs?
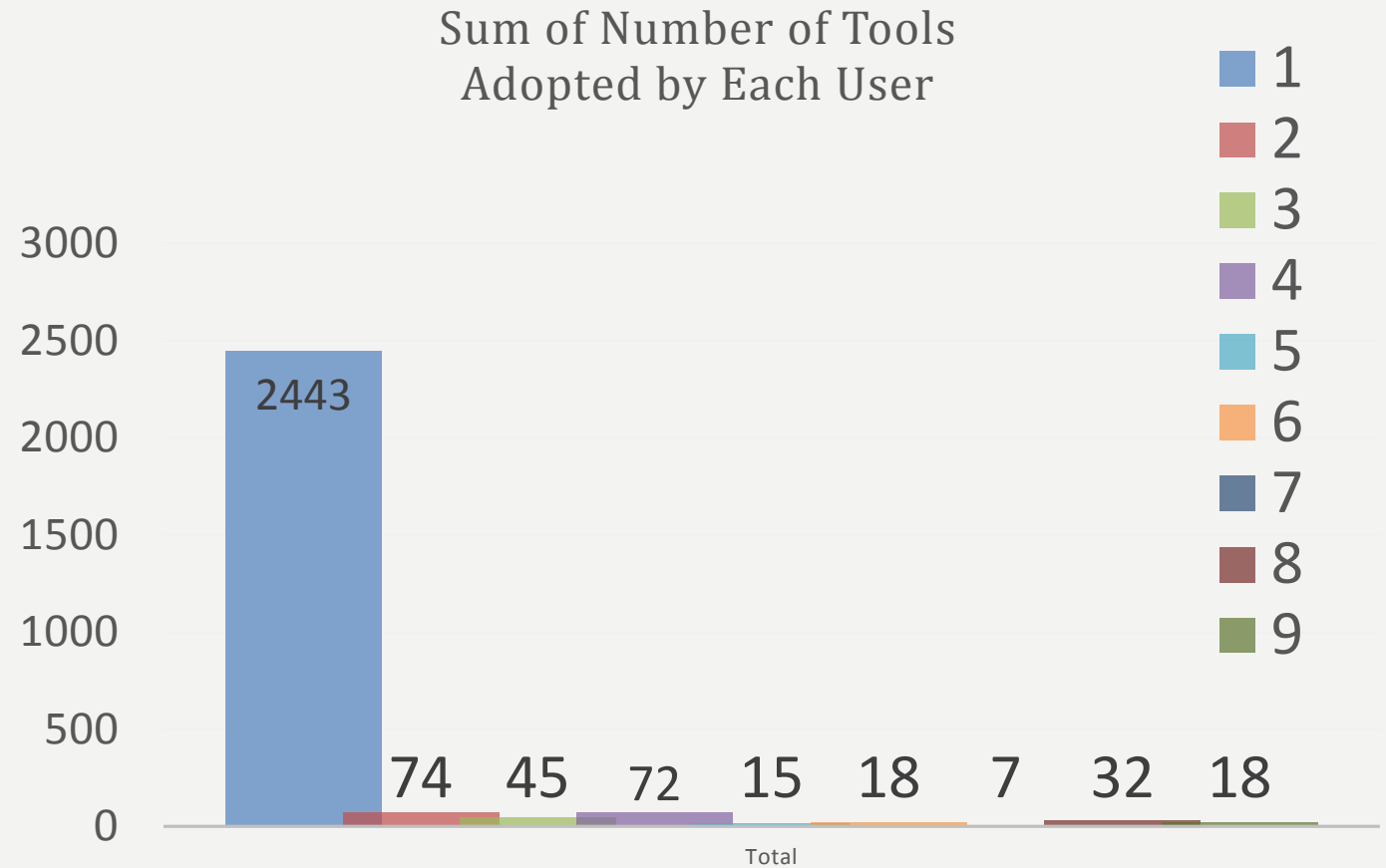   1. Academic
    2. Personal

E. Alana James, ED.D.
DoctoralNet

DOCTORAL & MASTERS NET
Advancing Graduate Support

Do they use it?

And what can we learn from that use that will help us build smart & effective?

E. Alana James, ED.D.
DoctoralNet

Usage

- Point in time May 2019 for wide range of learners

- Population 42K students

- N= 5.4K unique users

- Adopting between 1 – 10 tools

- 9.5K instances of adoption,

- **Average 12% of the full population across 10 universities**

- **Average time in system 1 year**

Sum of Number of Tools Adopted by Each User

Legend: 1, 2, 3, 4, 5, 6, 7, 8, 9

Value	Count
1	2443
2	74
3	45
4	72
5	15
6	18
7	7
8	32
9	18

Total

E. Alana James, ED.D.
DoctoralNet

Doctoral Students Adoption Choices

What Tools Do They Use?

How much did they use them?

Webinars

#1
6435 hours of webinar usage

Experiences

#2
2501 students opted – in for experiences

Uni.pd,education site

#3
In 5 months...
660 unique visiting 1K times looking at 4K pages over 15 minutes

Boxed Sets

#4
178 boxed sets of topical videos

Groups

#5   411 hours of groupwork

Doctoral Students Adoption Choices

E. Alana James, ED.D.
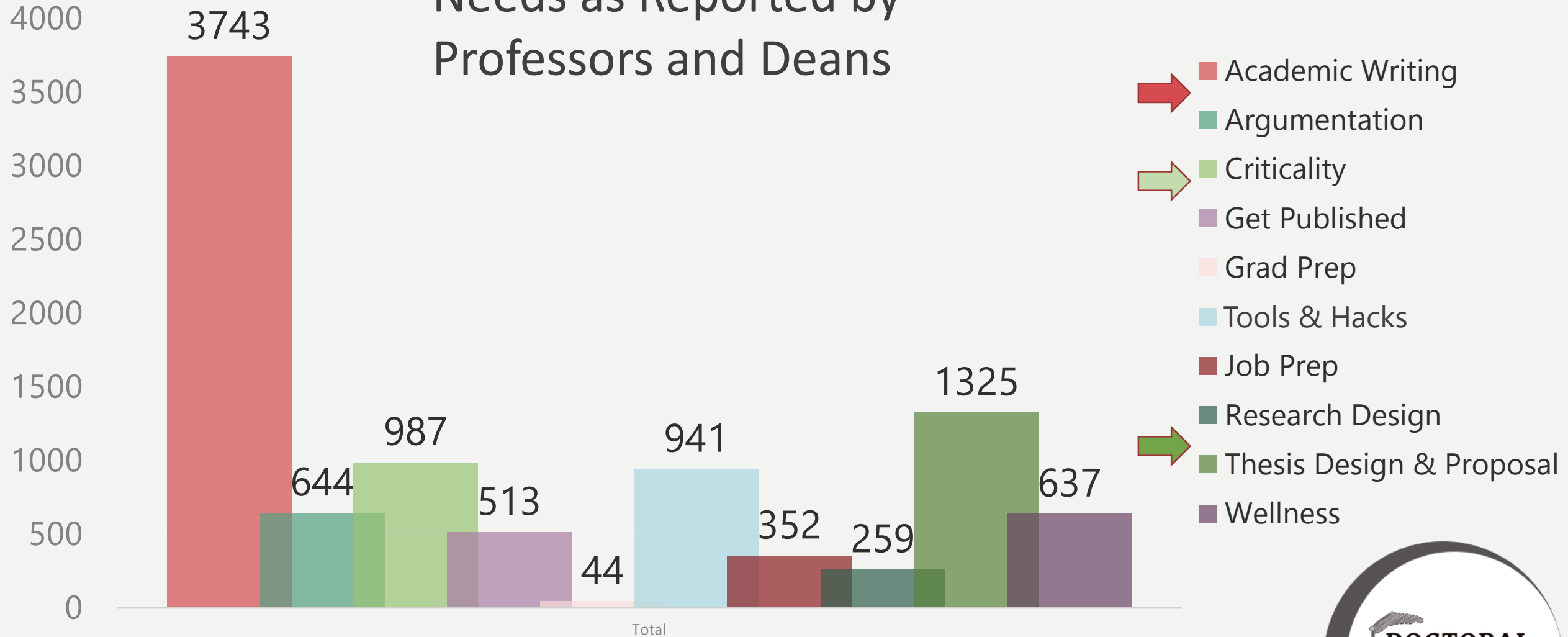DoctoralNet

DOCTORAL & MASTERS NET
Advancing Graduate Support

Are we meeting known needs?

Academic needs – 10 tags

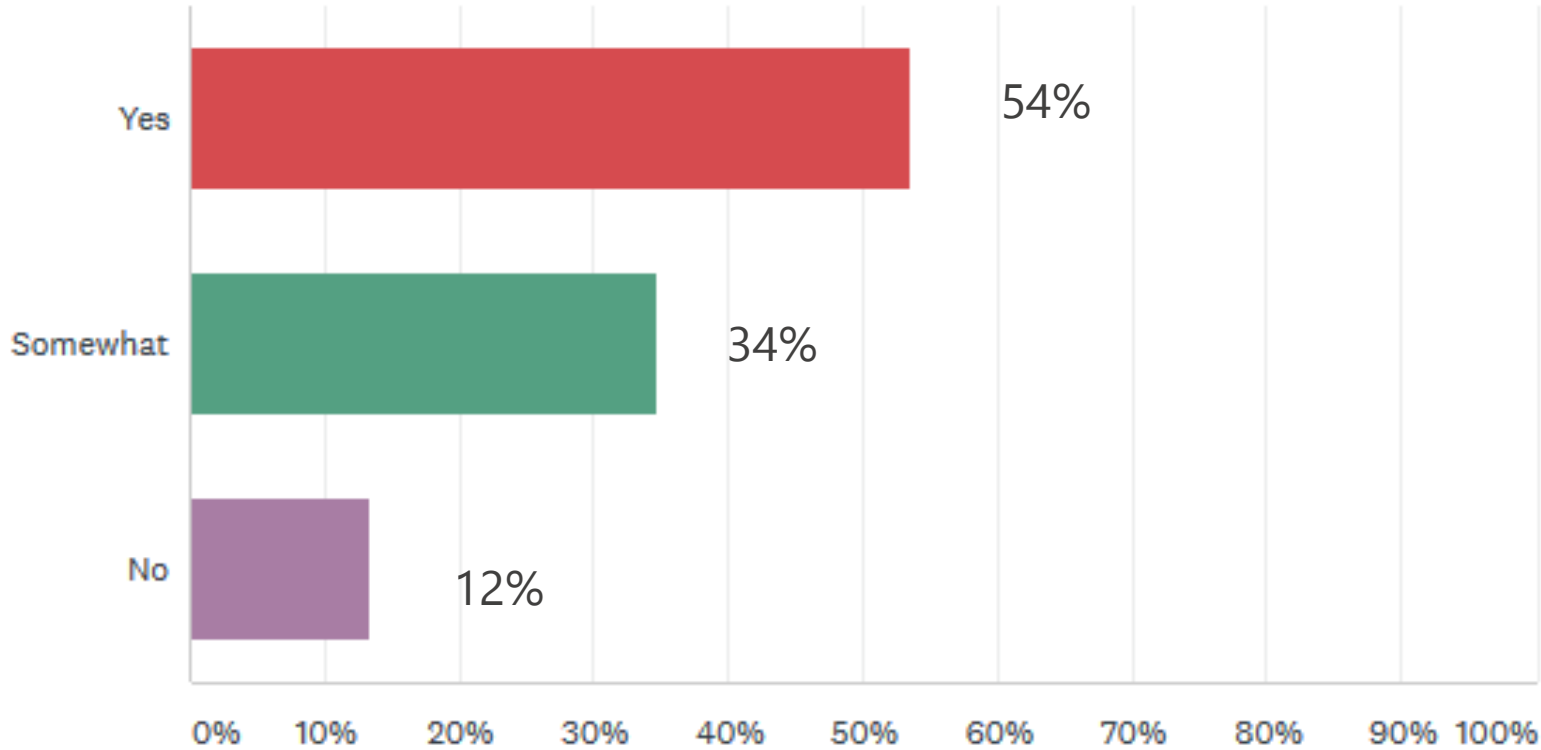Personal Needs ~ Five Frustrations of PostGraduate Education
(Gardner, S., 1990)

E. Alana James, ED.D.
DoctoralNet

Needs as Reported by Professors and Deans

Academic Writing	3743
Argumentation	644
Criticality	987
Get Published	513
Grad Prep	44
Tools & Hacks	941
Job Prep	352
Research Design	259
Thesis Design & Proposal	1325
Wellness	637

Doctoral Students Adoption Choices

E. Alana James, ED.D.
DoctoralNet

Qualitative data... **from a Masters student**

*I really have to tell you that **if it was not for the support of DoctoralNet there would be no way that I would have survived this year**. Your support, inputs and webinars have been invaluable. I am looking forward to start my PhD with DoctoralNet next year. I think I will be so much better prepared.*
Anelien Ventner, UNISA

From a **Doctoral Graduate**

*I was reaching the end of my laboratory experiments and needed to start writing it all up! I hit a wall and needed to regain some self-confidence!   As the weeks came and passed, **I realised two things**.*
1. ***I can do this!***
2. ***I am not alone!***
Though my research was very different to my peers, we had very similar questions and difficulties!

Harriet finally wrote to us:

Dear Alana,
I had my viva on Monday and was awarded a PhD! Only a few minor changes are required! So I am delighted!
*But **I wouldn't have managed to push through without your help**, advice, the website, your book and nor without everyone involved in the accelerator experience. So thank you!*
Best wishes
Harriet Cole, Dublin City University

Doctoral Students Adoption Choices

E. Alana James, ED.D.
DoctoralNet

DOCTORAL & MASTERS NET
Advancing Graduate Support

Ambiguity

31.5% red

Skill
Development
Needed

19% red

Gardner, S. (2007, 2008, 2009, 2010)

54% of this sample reported
they had seriously
considered dropping out

Work-Life
Balance

57% red
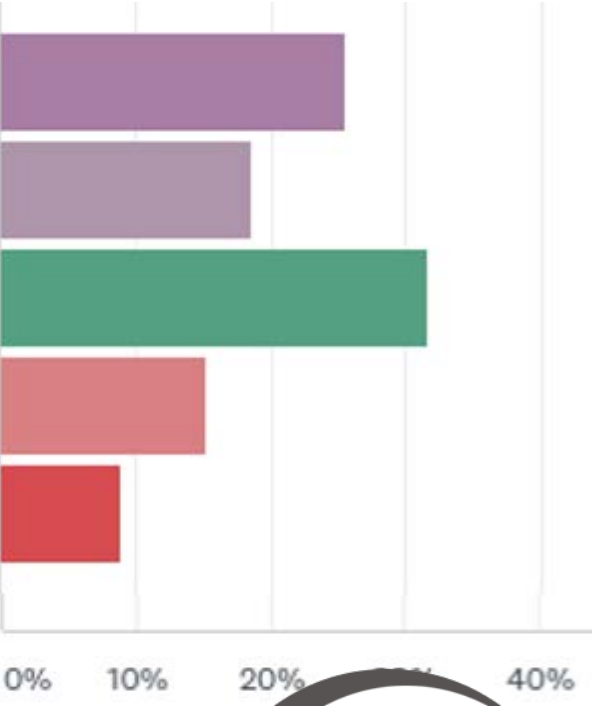
Not Enough
Support

48% red

Too much or
Too Little
Independence

24% red

0% 10% 20% 30%

0% 10% 20% 30% 40%

0% 10% 20% 30% 40%

■ Seldom if ever (less that three instances you can think of).

■ Occasionally (happened once a semester or more).

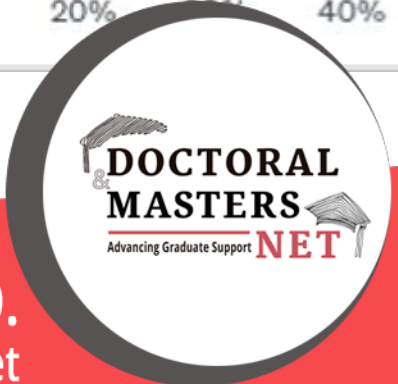■ Sometimes (a few instances during a semester when you felt this to be an issue).

■ Frequently (this challenge was frequent enough to affect my feelings about my gradu...

■ A problem area (this challenge caused my graduate work to slow down or stop).

DOCTORAL & MASTERS NET
Advancing Graduate Support
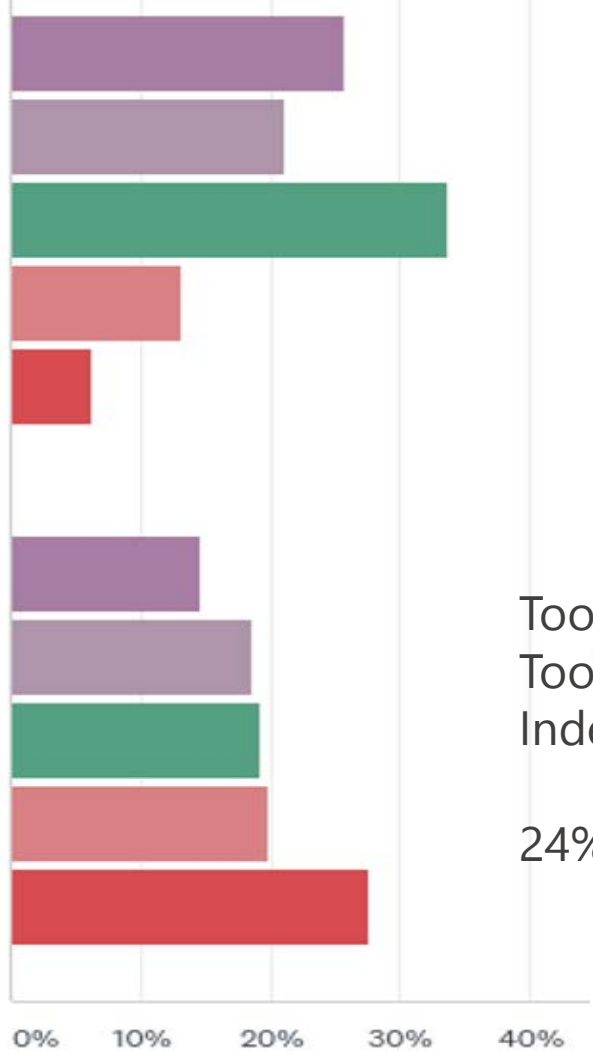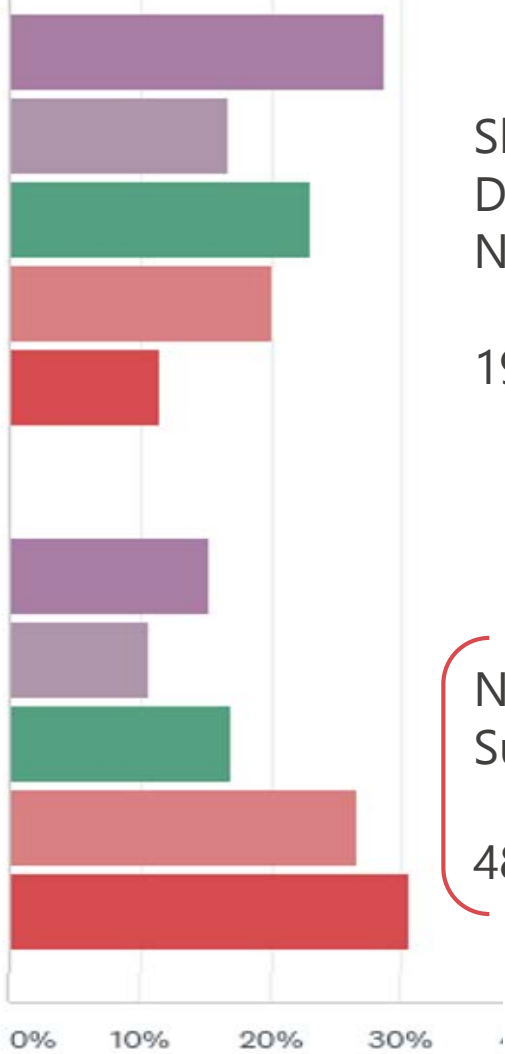
E. Alana James, ED.D.
DoctoralNet

What Should We Be Learning?

From the training industry?

E. Alana James, ED.D.
DoctoralNet

Your PD Plan...

Plan ahead to ensure the tools you choose meets your short-term and long-term goals.

Learner Driven Offerings

E. Alana James, ED.D.
DoctoralNet

DOCTORAL & MASTERS NET
Advancing Graduate Support

Conclusions: Do they show up?

- Yes, and in greater numbers than on campus activities

- Still 10-25% is not all – so what is required next?
  - More years on campus
  - Greater understanding by faculty of what is offered
  - Communication other than email

- **Hypothesis – marketing needs to be wider and more varied**
  - On campus digital advertising
  - Campuses are printing some – like table tents in libraries
  - They liked our brochure so much we white labeled it for them/their students
  - Stamps and endorsements

E. Alana James, ED.D.
DoctoralNet

DOCTORAL & MASTERS NET
Advancing Graduate Support

Job preparation aimed at helping you pu[t] graduate data together. TAMU's digital pr[o] development platform [at] https://ta[...]

E. Alana James, ED.D.
DoctoralNet

Conclusions: Are we meeting known needs?

- As reported by Professors & Deans? Yes

- Do the services help students proceed? Yes

- Can we make a case we are impacting retention and completion?
    - Yes, but need more varied data

Argument to consider

- Early stage researchers make their own choices, will choose digital solutions

- As we innovate, we need to watch the pulse of other types of training

- Brown (2019)
  Suggests a theoretical and pragmatic change from the university that does it all to the university working with others and the others providing a neutral form of support that fills gaps.

User Experience

Design

E. Alana James, ED.D.
DoctoralNet

DOCTORAL & MASTERS NET
Advancing Graduate Support

FIFTH ANNUAL

KING'S College LONDON

Researcher Education & Development CONFERENCE

October 18th 2019

http://bit.ly/REDS2019   #redsCONF2019   @REDSconf

Beyond carrots and sticks

Building a culture of researcher development through intrinsic motivation

Dr Kate Jones, Senior Manager, Learning and Professional Development
@yetanotherKateJ

Dr Katie Wheat, Head of Higher Education Engagement @KL_Wheat

Katherine Parker-Hay, CHASE Research Assistant

Vitae_news

Background: mounting evidence that researchers intend to but do not engage with professional development.

- **50%** of researchers said they didn't engage in professional development because of time constraints.

    Thouaille, M., ''One Size Does Not Fit All' Report (Vitae, 2017)

- **45%** of institutions have noticed an increase in the number of DNAs over the past year.

    Evans, C., 'Did Not Attend' Interim Report (University of St Andrews, 2019)

Initial question: how can researcher developers foster intrinsic motivations for engagement in development?

New research question (?): can professional development be based on intrinsic motivation?

'**Intrinsic motivation** is defined as the doing of an activity for its inherent satisfaction rather than for some separable consequence. When intrinsically motivated, a person is moved to act for the fun or challenge entailed rather than because of external products, pressures, or rewards.'

Ryan, R. M., and Deci, E. L. (2000). Intrinsic and extrinsic motivations: classic definitions and new directions. *Contemp. Educ. Psychol.* 25, 54–67.

Vitae Conference 2019

- Why do you think researchers don't engage?

no supervisor/institutional encouragement

not understanding value

other priorities

time

- What solutions do you think would boost engagement?

personalise the offering

model professional development

emphasise credibility
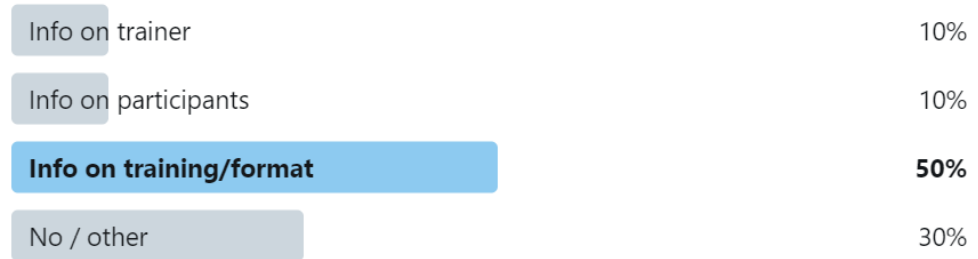
tackle anxiety

FIFTH ANNUAL

KING'S College LONDON

Researcher Education & Development CONFERENCE

October 18th 2019

http://bit.ly/REDS2019   #redsCONF2019   @REDSconf

INTRODUCING THE "TIPS" MODEL
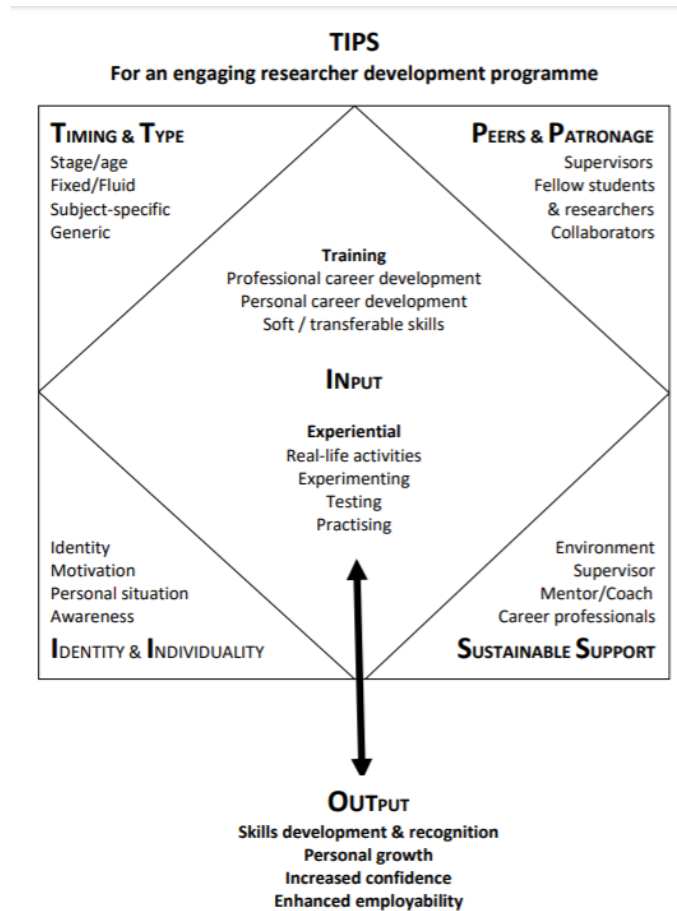
Sarah Blackford, SFHEA
Academic career consultant
Hon Teaching Fellow, Lancaster University

Tony Bromley, PhD
Senior Training & Development
University of Leeds

TIPS

For an engaging researcher development programme

TIMING & TYPE
Stage/age
Fixed/Fluid
Subject-specific
Generic

PEERS & PATRONAGE
Supervisors
Fellow students
& researchers
Collaborators

Training
Professional career development
Personal career development
Soft / transferable skills

INPUT

Experiential
Real-life activities
Experimenting
Testing
Practising

Identity
Motivation
Personal situation
Awareness

IDENTITY & INDIVIDUALITY

Environment
Supervisor
Mentor/Coach
Career professionals

SUSTAINABLE SUPPORT

OUTPUT
Skills development & recognition
Personal growth
Increased confidence
Enhanced employability

The "Building"

Training
Professional career development
Personal career development
Soft / transferable skills

INPUT

Experiential
Real-life activities
Experimenting
Testing
Practising

The "Building" – Events and 1-2-1

The "Building" - Experiential learning

Your employment | **Tools & support** | **Education & research** | **Our KI**

🔊 Listen

Internship projects for postdocs and early career researchers

⊖ Career Service   ⚑ Denna sida på svenska

This program is open to postdoctoral and early career researchers with a fixed term employment at KI, or on a KI stipend, before and during the internship. Career service offers about 30 internship positions, with a financed salary, at a company or organization within both private and public sector every year.

> Next announcement: Preliminary set to May - 2019

In short, the organizations provide us with project proposals and the projects will be announced by KI Career Service. You can apply to up to three projects. The organizations ___ with interviewing the candidates and make a final selection. KI Career Service

Internship projects for postdocs and early career researchers

Application process

Q & A for applicants

Documents

Links

The "Scaffolding"

TIMING & TYPE
Stage/age
Fixed/Fluid
Subject-specific
Generic

PEERS & PATRONAGE
Supervisors
Fellow students
& researchers
Collaborators

Identity
Motivation
Personal situation
Awareness

Environment
Supervisor
Mentor/Coach
Career professionals

IDENTITY & INDIVIDUALITY

SUSTAINABLE SUPPORT
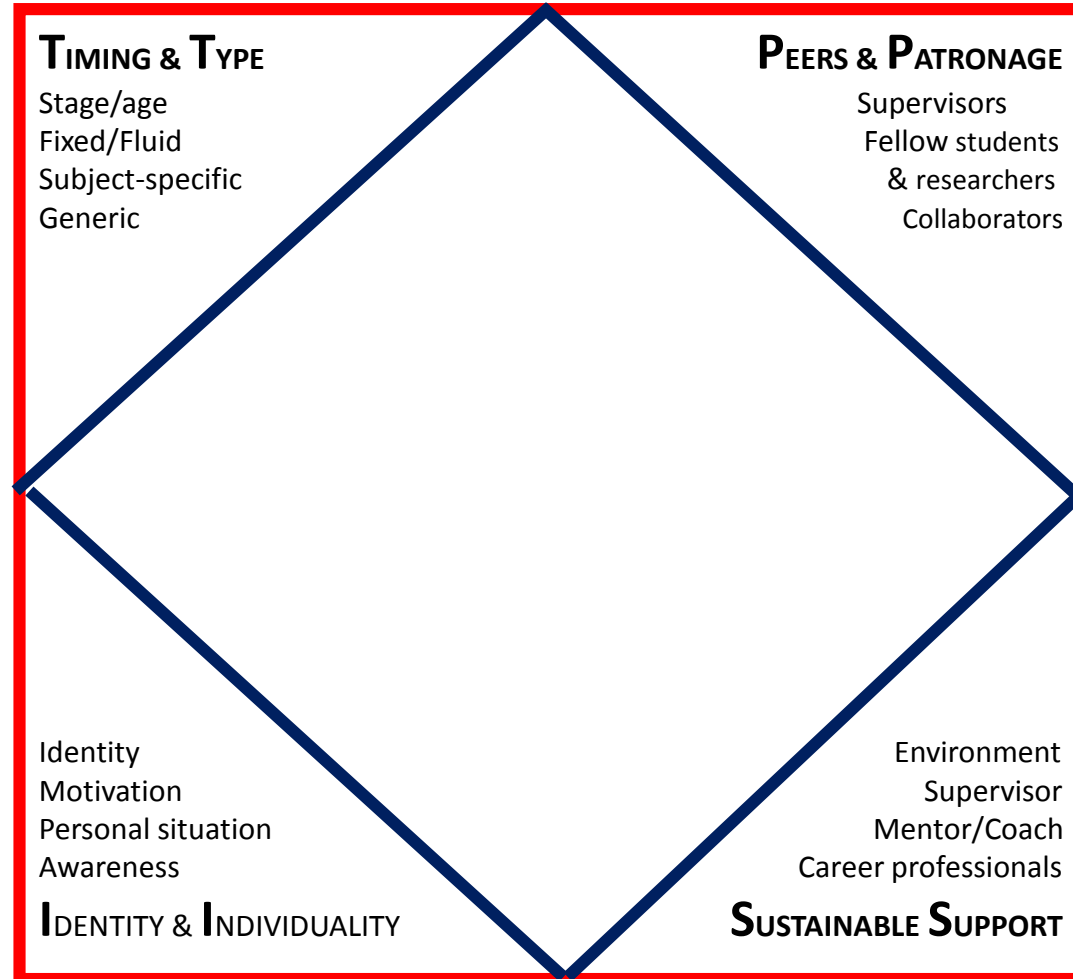
Sustainable Support
Culture, supervisor, mentor/coach, career professionals

Åkerlind (2005): *'With respect to skill development opportunities, in particular, freedom to take advantage of such opportunities depended primarily on receiving support from PDRs' supervisors'.*

Åkerlind (2005): *'Required support was in two forms: support for the time taken to spend on such activities [ ] and financial support for fee-based events [ ].'*

Huber (2011): *'… sustainability has to become a focus of attention. How is it possible to move from knowledge to action [ ], to transfer what has been learnt [ ].'*

Peers & Patronage
Supervisors, fellow students and researchers, collaborators

Kriek and Grayson (2009) *'the following common features were identified: reflection on [ ] own practice, development of teachers' content knowledge, provision of infrastructure to support teachers, **collaboration with fellow teachers and researchers**, provision of opportunities to try out and discuss new teaching strategies, development of teachers as lifelong learners and recognition and development of teachers' beliefs.'*

Visser et al (2010) *'The result of the professional development program should be a well-organized network in which teachers from different schools participate in **collaborative** activities.'*

Timing and Type

"…. PGR was resentful of the fact that she was unable to decide her activities for herself, a resentment which did not exist at University X since PGRs could exercise their own judgement regarding detailed engagement with the programme."

"PGR Z (Christa) explained that some parts of the programme in the 1st year were compulsory, e.g. statistics, Endnote as well as a 2-day course at the local university including sessions such as time management and team building. Many of these courses were not considered relevant to Christa; e.g. she didn't use statistics in her research.
Also, in the time management workshop exercises around setting long- and short-term goals were not relevant to Christa who was on a rotation programme during her 1st year which meant that her PhD project was not decided upon at this point."

Identifying development opportunities

We offer a range of both online learning and face-to-face workshops to support your professional development during your doctorate. This is intended to compliment development activities that are provided to you through your department or faculty.

Blackford, S (2011)
(Master's thesis)

University of Bath

Timing and Type

Compulsory vs optional

Bespoke vs generic

Saunders, C (2009) **Subject-specificity**. In several cases, it was felt that the programme still failed to provide sufficiently nuanced support for the individual (sub)disciplines: specifically, for HPSTM and theology / biblical studies (in our programme – as in many academic departments – these were 'clustered' with philosophy and with religious studies respectively).

On the one hand, this **arguably strengthens the mandate for a discipline-focused approach**. On the other, it highlights the challenges of providing a suitably fine-grained programme: in each case, our 'clustering' was motivated by considerations of feasibility (given the small size of the relevant research communities) rather than a disregard for the disciplinary differences involved.

Identity and Individuality

	HIGH ADAPTABILITY	LOW ADAPTABILITY
HIGH SELF AWARENESS	Proactivity; 'Smart' performance	Paralysis; Blocking; Avoidance
LOW SELF AWARENESS	Reactivity; Chameleon behaviour	Rigidity; Performing to orders

HALL, D.T. (2004). The protean career: a quarter-century journey. *Journal of Vocational Behavior*. 65, p. 1 – 13.

ARTHUR, M.B. (1994). The boundaryless career. A new perspective for organizational inquiry. *Journal of organizational Behavior*, 15 (4), p. 295 – 301.

Identity and Individuality

Identity and Individuality

As a part-time student she believed she is **under greater pressure than full-time students** in terms of work-life balance. This is a fact which has been borne out through the work of Edwards (2009) who studied the one hundred part-time research students and found that they were particularly appreciative of the opportunity to meet fellow part-time students and **cited suggestions for training sessions based on personal and emotional asp**ects.

Women In Academia: What Can Be Done To Help Women Achieve Tenure?

Barbara Mandleco, Professor, Brigham Young University College of Nursing

Abstract

Women are not tenured at the same rate they are receiving PhDs, and less likely to be tenured when compared to their male counterparts. Reasons women have difficulty achieving tenure include not discussing important information about an academic appointment with colleagues, working part time or as adjunct faculty, being involved in "pastoral or administrative" work, not having a realistic understanding of how important research is when untenured, and experiencing non academic issues. Interventions to alleviate this situation include departmental/campus policies before/during/after the woman is hired. Before being hired it is important to provide female faculty mentors to bright/capable women doctoral students and help them prepare for the academy by prioritizing scholarship over teaching and encouraging publications. During the hiring process it is useful to target women through advertising/recruiting at conferences, consider hiring current female doctoral students after completion of a post doctoral experience at another institution, and appointing women faculty as chair/members of search committees. After women

SELECTED REFERENCES

Timing and Type

> Blackford S. 2011. *A critical evaluation of selected researcher development programmes.* Master's thesis (unpublished)
> Milos D. 2019. Embedding transferrable skills into the higher education degree by researcher candidature. *Studies in graduate and postdoctoral education,* https://doi.org/10.1108/SGPE-04-2019-0046
> Penuel WR, Fishman BJ, Yamaguchi R and Gallagher LP. 2007. What makes professional development effective? *American Educational Research Journal,* 44 (4), p. 921 –958 DOI: 10.3102/0002831207308221
> Pritchard J, MacKenzie J and Cusak M. 2010. The response of physical science post-graduates to training courses and the connection to their PhD studies. 29-44. *International Journal of Researcher Development,* 1 (1), p. 29 – 44.
> Saunders C. 2009. Developing researchers in the arts and humanities: lessons from a pilot programme to develop discipline-specific research skills. *International Journal of Researcher Development,* 1 (1), p. 49 – 67.

Identity and the Individuality

> Boud, D. 1995. Enhancing Learning through Self Assessment, Kogan Page: London.
> Hall DT. 2004. The protean career: a quarter-century journey, *Journal of Vocational Behavior,* 65, p. 1-13.
> Marcia JE. 1966. Development and validation of ego-identity status. *Journal of Personality and Social Psychology, 3*(5), 551-558.
> Müller R and Kenney M. 2014. Agential Conversations: Interviewing Postdoctoral Life Scientists and the Politics of Mundane Research Practices, Science as Culture, 23(4), 537-559, DOI: 10.1080/09505431.2014.916670

Peers and Patronage

> Åkerlind GS. 2005. Postdoctoral researchers: roles, functions and career prospects, Higher Education Research & Development, 24(1), 21-40, DOI: 10.1080/0729436052000318550
> Bosley SLC, Arnold J and Cohen L. 2009. How other people shape our careers: A typology drawn from career narratives. *Human Relations,* 62, p. 1487-1520.
> Duke DC and Denicolo PM. 2017. What supervisors and universities can do to enhance the doctoral research experience, *FEMS Microbiology Letters,* 364, p.1-7.
> Jackson C, Milos D and Kerr M. 2019. Mentoring for employability: a state-level impact study. *Studies in Graduate and Postdoctoral Education,* Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/SGPE-04-2019-0047
> Kuhn C and Castano Z. 2016. Boosting the career development of postdocs with a peer-to-peer mentor circles program, *Nature Biotechnology,* 34 (7), 781-783.

> Lee A. 2012. *Successful research supervision. Advising students doing research.* London: Routledge.
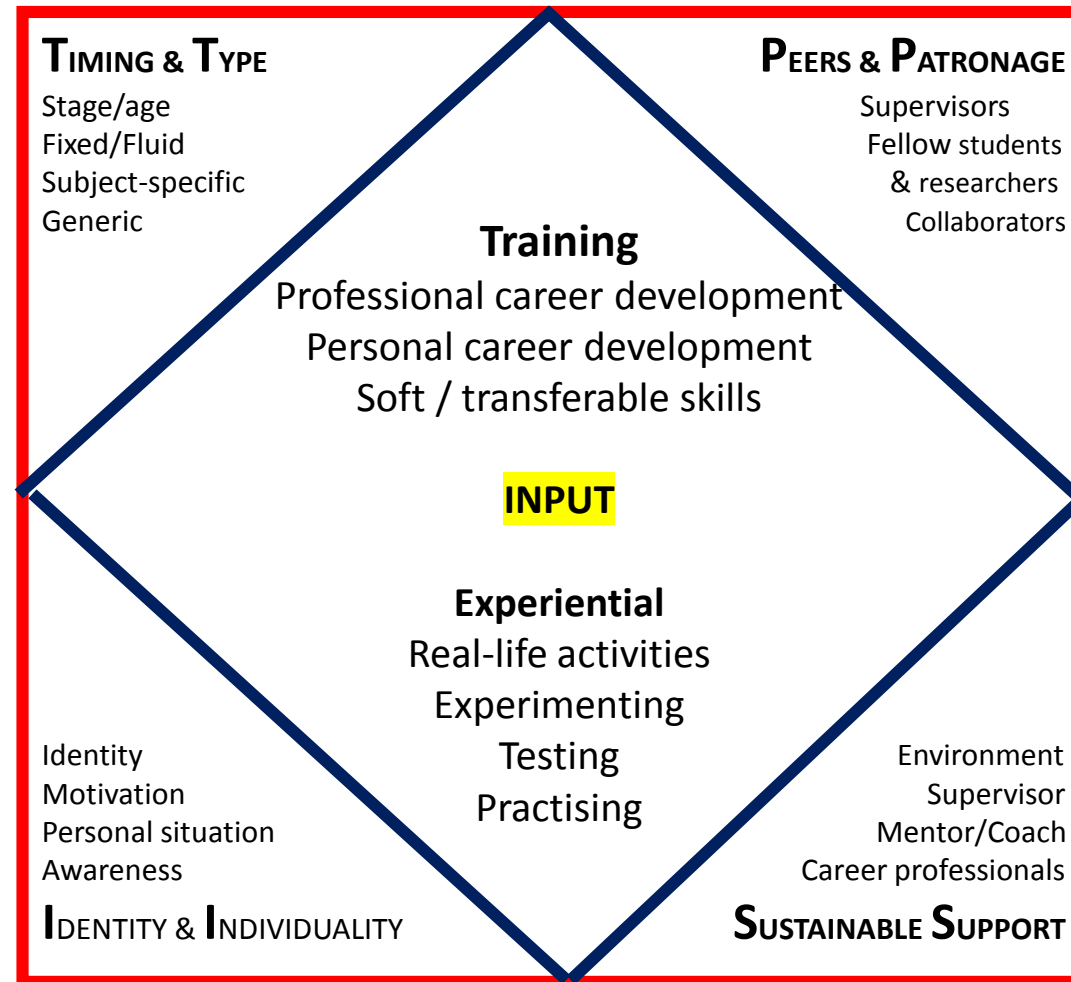
Sustainable Support

> Blackford S. 2018. Harnessing the power of communities: career networking strategies for bioscience PhD students and postdoctoral researchers. *FEMS Microbiology Letters,* 365(8), p. 1-8.
> Saadi IA and Collins HE. 2018. Researcher development in Malaysia: a reflection-on-action. *Studies in graduate and postdoctoral education,* 9(2), p. 259-273.
> Sala-Bubaré A and Castelló M. 2017. Exploring the relationship between doctoral students' experiences and research community positioning, Studies in Continuing Education, 39(1), 16-34, DOI: 10.1080/0158037X.2016.1216832
> Scafaldi AK and Berman JE. 2011. A positive postdoctoral experience is related to quality supervision and career mentoring, collaborations, networking and a nurturing research environment, *Higher Education,* 62, p. 685-698.
> Shacham M and OdCohen Y. 2009. Rethinking PhD learning incorporating communities of practice. *Innovations in Education and Teaching International,* 46(3), p. 279-292.
> Su X, Johnson J and Bozeman B. 2015. Gender diversity strategy in academic departments: exploring organizational determinants. *Higher Education,* 69, p. 838-858.
> Walsh E. 2010. A model of research group microclimate: environmental and cultural facors affecting the experiences of overseas research students in the UK, *Studies in Higher Education,* 35 (5), 545-560.
> Way S, Morgan AC, Larremore DB and Clauset A. 2019. Productivity, prominence and the effects of academic environment, *PNAS,* 116 (22), 10727-10733.

Context

> Patton W and McMahon M. 2006. The systems theory framework of career development and counselling: Connecting theory and practice. *International journal for the advancement of Counselling,* 28(2), p. 153-166.
> The Impact Framework 2012. Revisiting the Rugby Team Impact Framework. Careers Research and Advisory Centre (CRAC) Limited. https://www.vitae.ac.uk/vitae-publications/reports/ieg-report-2012.pdf
> The Rugby Team Impact Framework. 2008. *Evaluating the impact of developing researcher skills.* Careers Research and Advisory Centre (CRAC) Limited. https://www2.le.ac.uk/departments/doctoralcollege/about/external/publications/impact-framework.pdf
> Wall GP and Welsch CP. 2013. Employability in Europe: enhancing postgraduate complementary skills training. York: Higher Education Academy. https://www.heacademy.ac.uk/system/files/psc_159_0.pdf Accessed 19 June 2019.

The "Scaffolding" supports the "Building"
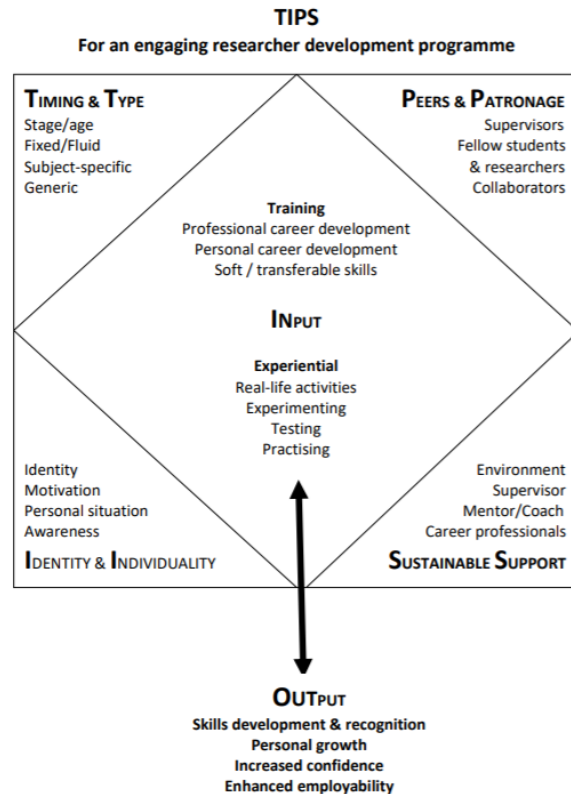
TIMING & TYPE
Stage/age
Fixed/Fluid
Subject-specific
Generic

PEERS & PATRONAGE
Supervisors
Fellow students
& researchers
Collaborators

Training
Professional career development
Personal career development
Soft / transferable skills

INPUT

Experiential
Real-life activities
Experimenting
Testing
Practising

Identity
Motivation
Personal situation
Awareness

IDENTITY & INDIVIDUALITY

Environment
Supervisor
Mentor/Coach
Career professionals

SUSTAINABLE SUPPORT

FIFTH ANNUAL

KING'S College LONDON

Researcher Education & Development CONFERENCE

October 18th 2019

http://bit.ly/REDS2019   #redsCONF2019   @REDSconf

Enhancing researcher wellbeing through support groups

Fryni Panayidou
Researcher Development Adviser

Benjamin Priest
Counsellor, Advice and Counselling Service

Support Group for PhD students

- Launched in 2018 as part of the Catalyst Fund project at Queen Mary

- By the end of the group, participants felt:

  - more confident in completing on time
  - that there's someone to talk to
  - generally better ➡ increase in wellbeing

Support Group for PhD students

*The group aims to provide a **safe, confidential space** in which PhD students support each other with personal, emotional and relationship issues that can obstruct academic progress.*

- isolation

- finding it hard to maintain confidence or motivation

- worries about career prospects

- the relationship with supervisors

- how stress, anxiety or other worries affect research progress

Queen Mary
University of London

Support Group: format

- 3 groups, 8 weekly sessions, 90 mins

- Up to 12 participants each

- Researcher Developer & Counsellor:
  offering both emotional and academic support

- Initial 15 minute appointment:
  - Confidentiality
  - **Support** vs therapy group
  - Suitability

Queen Mary
University of London

Support Group: evaluation

- Survey at the start and end of the group

- PRES 2017: personal outlook & confidence in completion

- Warwick-Edinburgh Mental Well-being Scale (WEMWBS)

Support Group: Results – PRES 2017
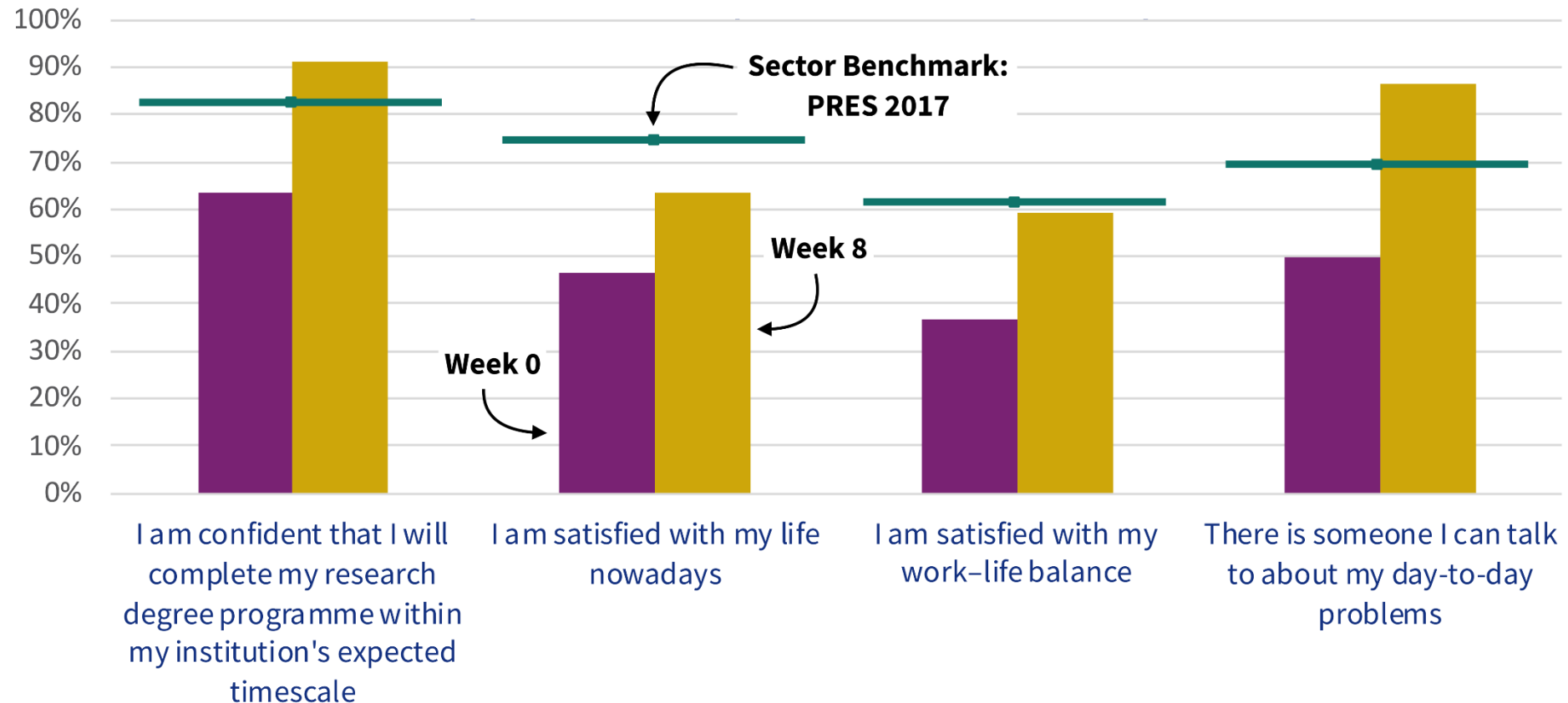
Warwick-Edinburgh Mental Well-being Scale

- 14-item scale covering subjective wellbeing and psychological functioning

- scored by summing the response to each item answered on a 1 to 5 Likert scale

- minimum score is 14 and maximum is 70

- suitable for measuring change due to short interventions
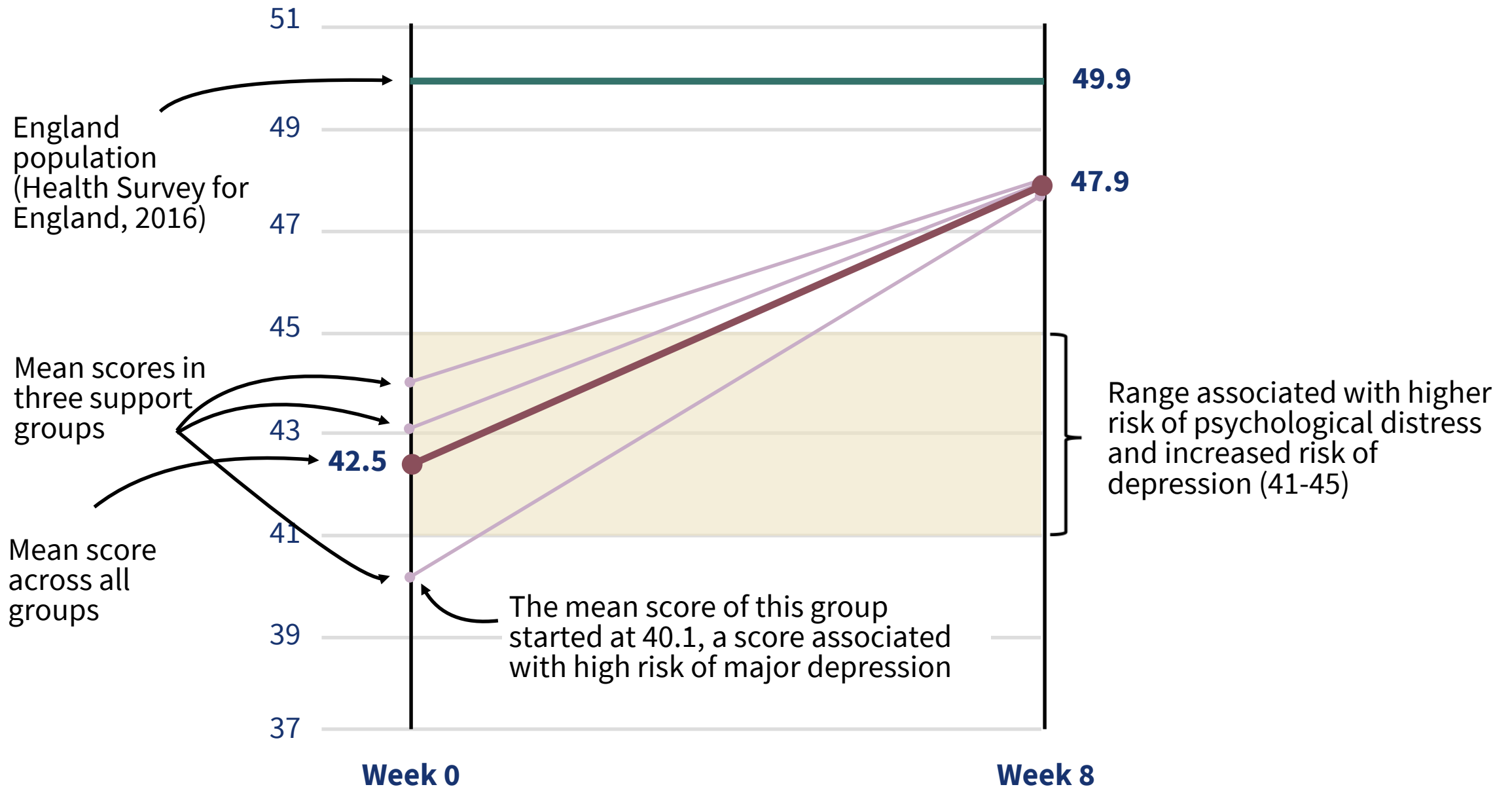
What were the most useful aspects of the support group experience?

"

*Finally I can **open up and talk about my problems** that have been bothering me for a long time, but I didn't know how to deal with or how to talk about it with other people. And it feels nice to know **it is not shameful** to have these problems and **it doesn't mean I am not good enough**.*

What were the most useful aspects of the support group experience?

"

*Hearing what other people were going through helped to **give me a perspective** on my own issues. Often the advice given to one person would apply to me too. Helped to **feel less alone** and felt good to think we were **helping one another**. A dedicated space once a week away from work was surprisingly helpful.*

Queen Mary
University of London

More on sense of belonging / community...

"

*Having a **community** and **not feeling isolated**. Getting insights from listening to other people's problems and feedback.*

"

*It has been useful to **feel part of a group**, which was missing in my life.*

Queen Mary
University of London

What do you think could be done to improve this group in the future?

- Longer duration:
  - Throughout the year
  - Throughout the PhD journey

- More structure (check-in every week)

- Smaller number of participants

What could QMUL change to improve the PhD experience?

- Incentivise academics to be better supervisors
  - Pastoral care
  - Unrealistic demands
  - Giving feedback

- More funding for initiatives like the support group / opportunities for PGRs to socialize

- Office space, equipment, etc

Queen Mary
University of London

Lessons learned

- Manage expectations: we aren't giving answers to everything or "fixing". It's about sharing & supporting

- Focus on what individuals want to change in themselves rather than blaming

- Smaller size of groups

- Emphasizing attendance

- More structure

Take home messages

- New data shows that Support Groups are very effective in increasing wellbeing, even after a short period of time

- Sharing common experiences and having a sense of belonging increases wellbeing and confidence in completion

- Collaboration between Counsellors and Researcher Developers allows for holistic support of PGRs

Thank you

Fryni Panayidou
f.panayidou@qmul.ac.uk

Benjamin Priest
b.priest@qmul.ac.uk

FIFTH ANNUAL

King's College London

Researcher Education & Development

CONFERENCE

October 18th 2019

http://bit.ly/REDS2019   #redsCONF2019   @REDSconf

FIFTH ANNUAL

King's College London

Researcher Education & Development CONFERENCE

October 18th 2019

http://bit.ly/REDS2019   #redsCONF2019   @REDSconf

PhD careers and employment in the UK

Identity, Agency and Choice

Dr Sally Hancock

Department of Education

UNIVERSITY of York

Researcher Education & Development Conference

King's College London, 17th October 2019

Outline

- Context - the rise of the doctorate

- What do we know about PhD employment in the UK?

- How are PhD researchers preparing for employment?

- Next steps for research and practice

The PhD in an age of expansion

China (People's Republic of)	55.4
Mexico	14.5
Spain	9.9
Portugal	9.3
Denmark	7.7
Australia	6.0
Belgium	4.7
Ireland	4.6
Korea	4.5
Hungary	4.3
Canada	4.3
New Zealand	4.1
United Kingdom	4.1
Netherlands	3.7
Finland	3.4
United States	3.0
Germany	2.0
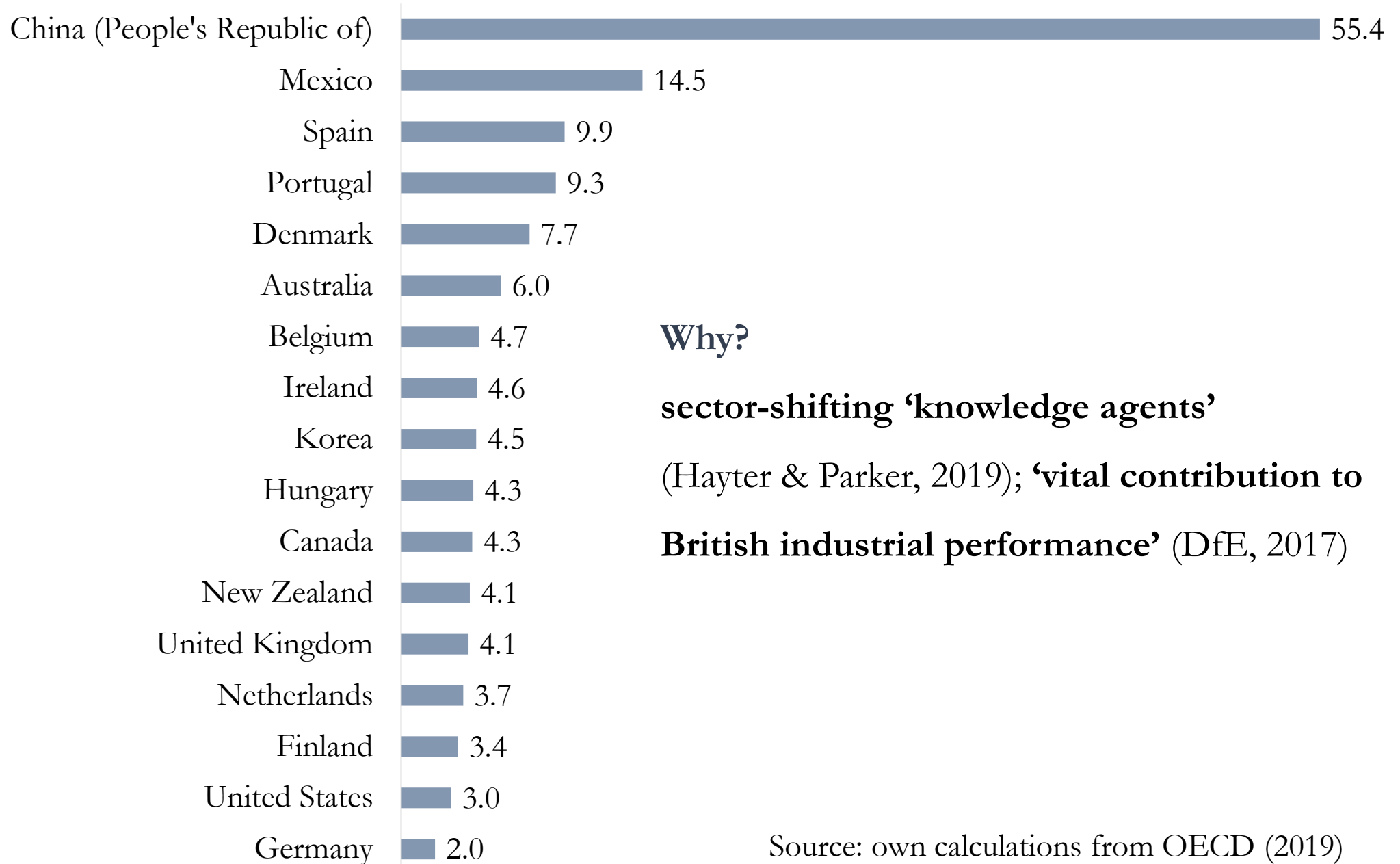
Why?

sector-shifting 'knowledge agents' (Hayter & Parker, 2019); **'vital contribution to British industrial performance'** (DfE, 2017)

Source: own calculations from OECD (2019)

Spending on research and development as a fraction of GDP, OECD countries, most recent available data

UK government plan: 2.4% of GDP by 2027

US

Japan

Germany

OECD average

UK now

UK target, 2027

Countries (left to right): Chile, Mexico, Greece, Slovakia, Poland, Turkey, New Zealand, Spain, Portugal, Luxembourg, Hungary, Italy, Estonia, Ireland, Canada, UK, Norway, Czech Republic, Netherlands, Iceland, Australia, France, Slovenia, UK target, 2027, Belgium, United States, Germany, Switzerland, Denmark, Austria, Sweden, Finland, Japan, Israel, South Korea

Source: Science is Vital (2017)

Academic year	UK	Other EU	Non EU
2008/09	9,960	2,540	5,202
2009/10	10,465	2,750	5,445
2010/11	10,915	2,915	6,130
2011/12	10,925	2,850	6,540
2012/13	12,375	3,095	6,605
2013/14	12,020	2,920	6,300
2014/15	12,870	3,070	6,825
2015/16	12,865	3,200	7,265
2016/17	12,890	3,470	7,695
2017/18	13,135	3,710	8,410

Doctoral graduates (n)
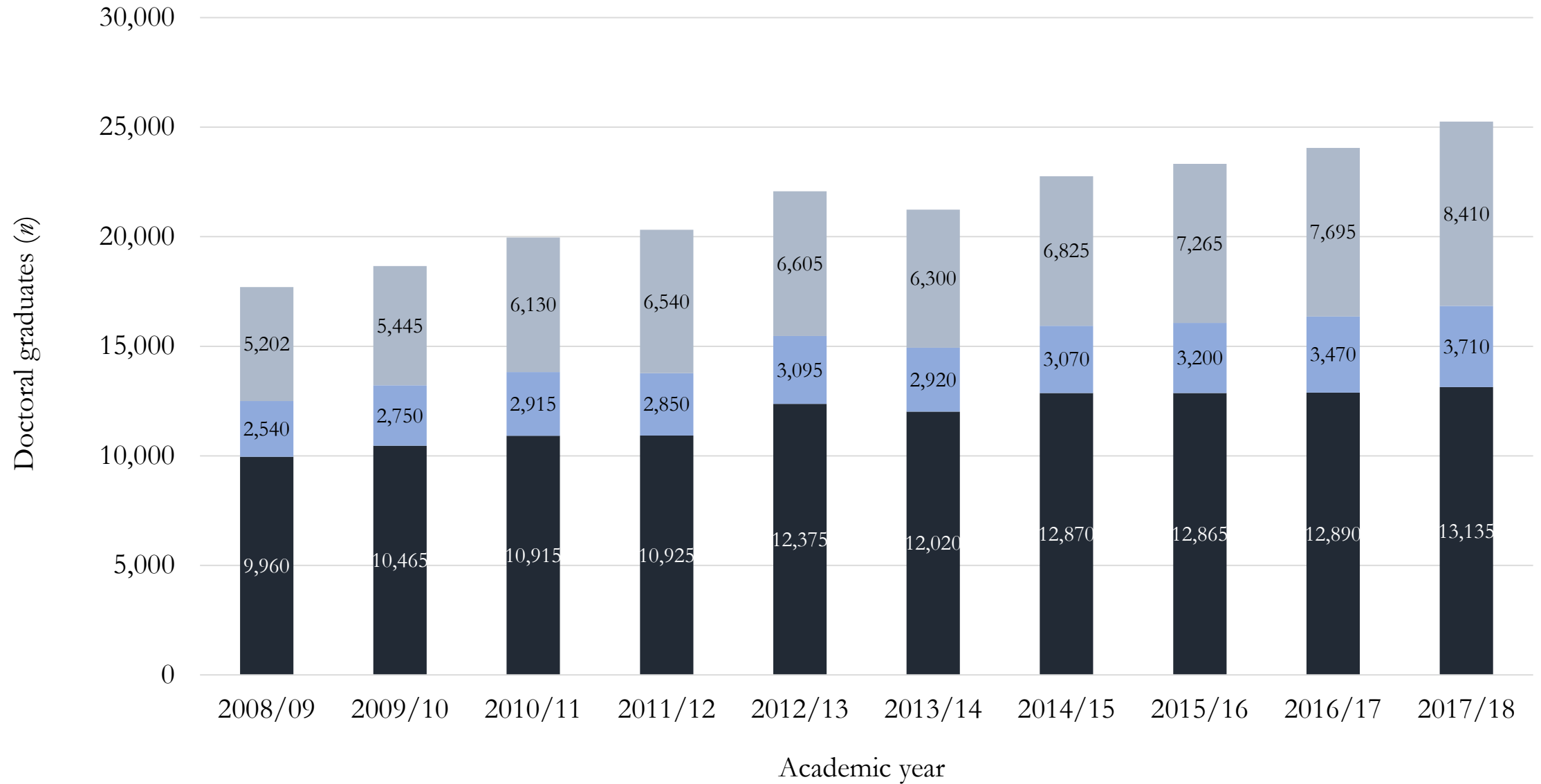
■ UK   ■ Other EU   ■ Non EU

Source: HESA Student Record

nature
bit.ly/phdfactory

THE PHD FACTORY

The world is producing more PhDs than ever before. Is it time to stop?
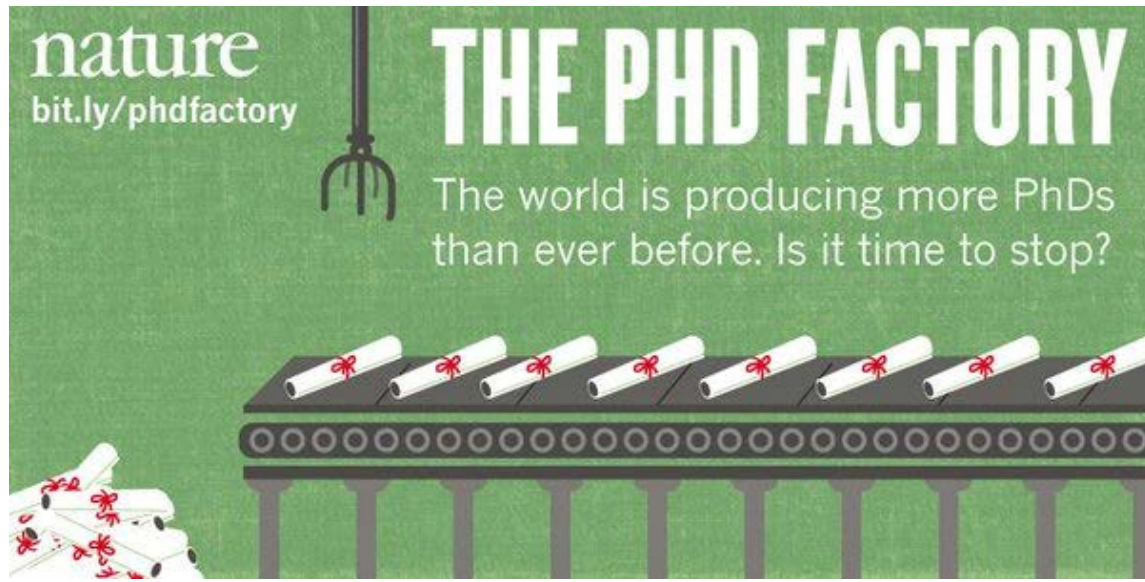
Give postdocs a career, not empty promises

THE ONES WHO GOT AWAY

Sometimes, the brightest stars in science decide to leave.
Nature finds out where they go.

Harsh reality

Two reports highlight the plight of postdocs on both sides of the pond aiming for academia.

Universities urged to tackle PhD mental health crisis

Institutions told they have a 'culture of excluding postgraduates' in wake of damning study

THE

What do we know about PhD employment in the UK?

Current state of knowledge

- Very little… compared to undergraduates

- Established studies in other countries…. but national context matters

- Policy research suggests high employability and earnings (RCUK 2014)

- Qualitative research suggests the continued preference of academic careers

(Wellcome Trust, 2013; McAlpine et al., 2010; McAlpine & Emmioglu, 2015; Skakni et al., 2019)

What do we know about PhD employment in the UK?

- **Destinations of Leavers of Higher Education (Long DLHE)**

  - UK PhDs graduating in 2008/9 and 2010/11

  - Surveyed at 3.5 years; $n = 4,731$ (39.5%)

- <u>**Bespoke dataset linked to Student Record**</u>

  - Academic and demographic characteristics

  - Age, gender, ethnicity, parental education & occupation

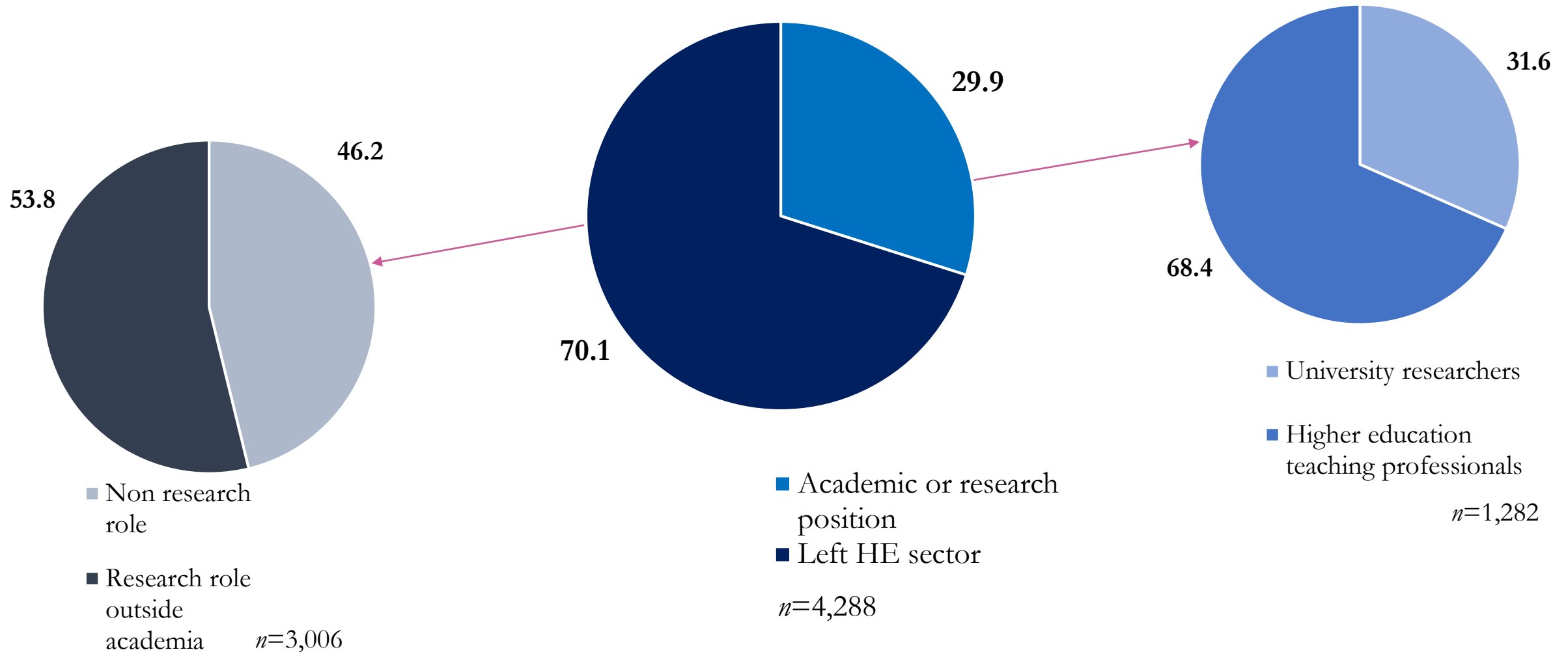# Some limits…

- **Data are not really longitudinal** – no link with prior aspirations, PhD or work experience

- **Many variables are missing or abridged** – social class, prior attainment, doctoral institution, ethnicity

- **The survey was not designed for doctoral graduates**

- **Very little on decision-making or other contextual factors (opportunity structures)**

A doctoral premium?

- **Higher earnings than first degree or Master's graduates**

  - Median salary **£38,000** (£27,000 for first degree graduates ten years on, Britton et al., 2016)

- **Higher rates of skilled employment**

  - Over 80% employed in 'expert' level work (Elias & Purcell 2013)

  - Only 8.2% in 'non-graduate' occupations (30.0-15.5% for first degrees, Behle, 2016)

- **Higher rates of career satisfaction**

  - 91.8% very or fairly satisfied (87.5% first degree graduates in same survey)

Occupational sector and role

46.2

53.8

Non research
role

Research role
outside
academia   *n*=3,006

29.9

70.1

Academic or research
position

Left HE sector

n=4,288

31.6

68.4

University researchers

Higher education
teaching professionals

n=1,282

Source: Long DLHE 2011/12 & 2013/14

Staying in academia - disciplinary differences

	Academic employment	Non-academic employment
Social sciences	50.6	49.4
Physical sciences & engineering	23.1	76.9
Biomedical sciences	25.4	74.6
Biological sciences	20.0	80.0
Arts & Humanities	45.2	54.8
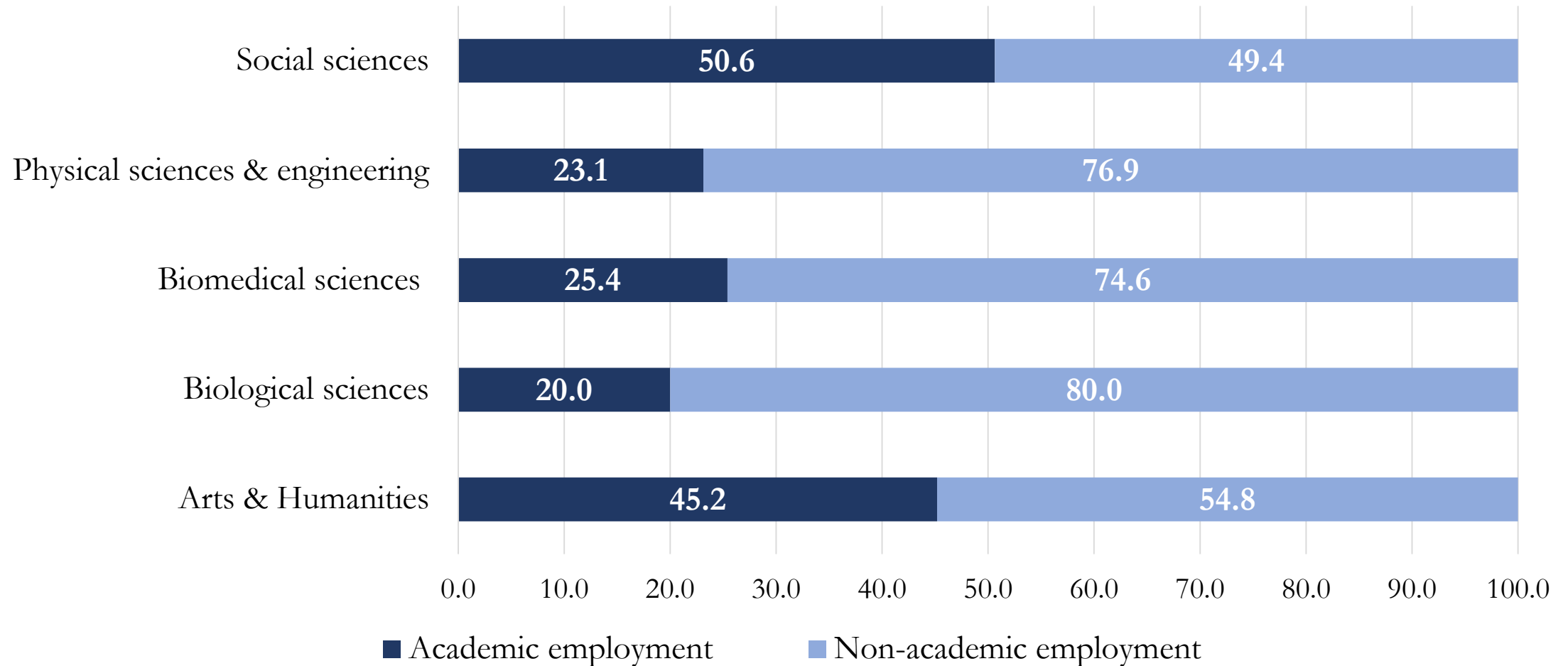
n=4,288

Source: Long DLHE 2011/12 & 2013/14

Research outside academia - disciplinary differences

n=3,007

Source: Long DLHE 2011/12 & 2013/14
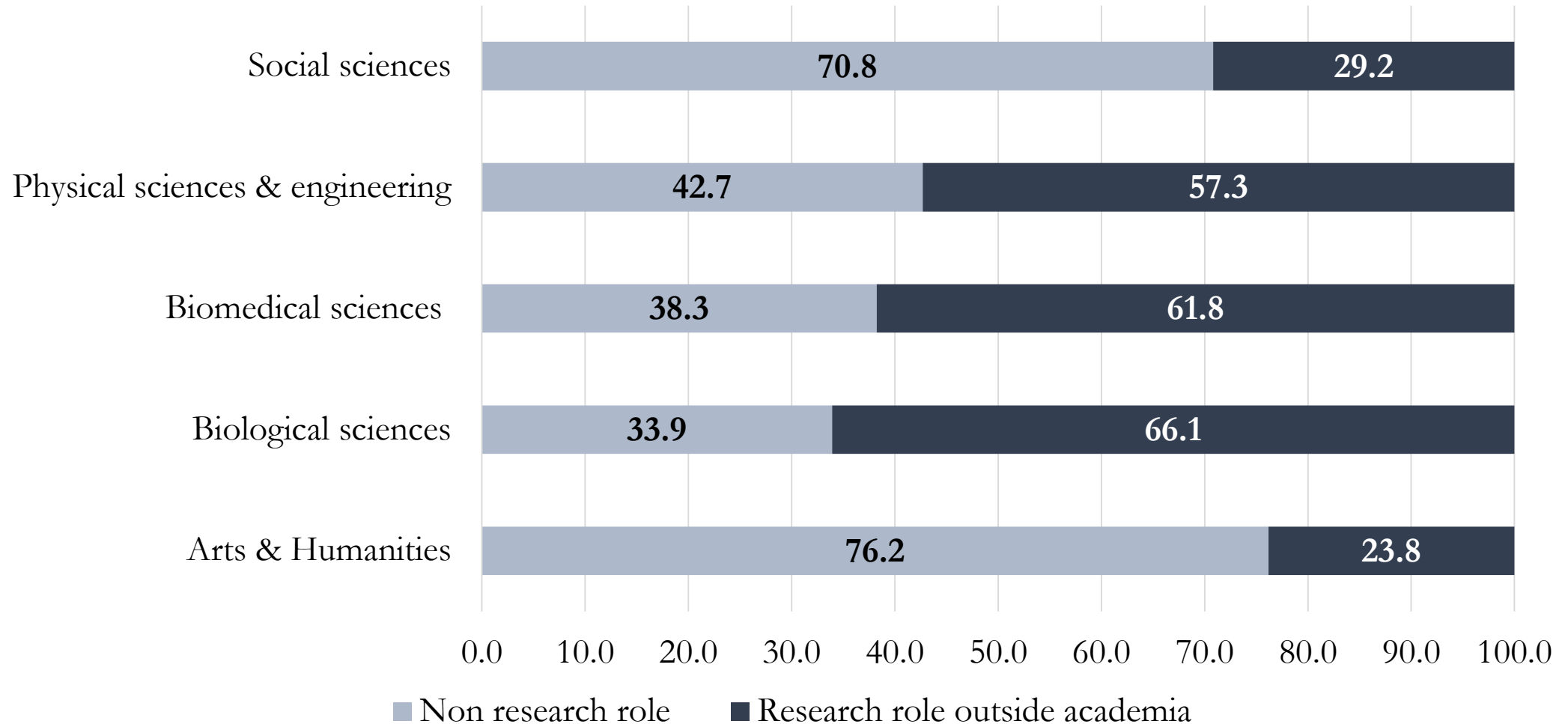
Who goes where?

- **Staying in academia is explained largely by academic characteristics**

  - Institution, subject and entry qualification are significant

  - Non-Russell Group; Arts & Humanities; Social Scientists; Taught Master's

  - Staying in academia is **not significantly** associated with demographic characteristics

- **Within academia, the above is true also for predicting salary level (>40k; >50k)**

  - Male PhDs significantly more likely to be employed as 'higher education teaching professionals'

- **Securing a research role on leaving academia**

  - Institution, subject and gender are significant

  - Russell Group; Sciences; Male PhDs → concern for Arts & Humanities, Social Science PhD who exit academia

How are PhD researchers preparing for employment?

Doctoral scientists and the knowledge economy

- Are doctoral scientists aware of the knowledge economy?

- If so, what are their attitudes towards it?

- How does it impact on their career planning?

CrossMark

A future in the knowledge economy? Analysing the career strategies of doctoral scientists through the principles of game theory

Sally Hancock[1]

Abstract
In recent decades, increasing participation in science, technology, engineering and mathematics (STEM) has emerged as a globally shared policy objective in higher education. This policy objective is underpinned by a commitment to the economic framework of the knowledge economy and the belief that STEM education, knowledge and innovation are prerequisites for economic growth. This paper is concerned with doctoral scientists, who occupy a position of considerable privilege according to knowledge economy discourse: expertly knowledgeable, highly skilled and sought by elite employers. This paper assesses these policy claims against the experiences of recent doctoral scientists studying in the UK. Data from a 3-year mixed-method study are subjected to a novel, game theory informed analysis of students' values, decision-making behaviour and career ambitions. While all doctoral scientists engage in career-oriented strategizing, the game strategies employed by students are diverse and reveal conflicted understandings of knowledge economy policy. Implications of these findings and the analytical merits of game theory are discussed.

Keywords Doctorate · Graduate careers · Decision-making · Knowledge economy · Game theory · Higher education policy

Introduction: the age of STEM?

In recent decades, a global political consensus has emerged over the importance of science, technology, engineering and mathematics (STEM) education (Freeman et al. 2014). This consensus is underpinned by a commitment to concept of the knowledge economy—an economic framework in which the creation, application and dissemination of knowledge generate prosperity (Bell 1973). In this framework, doctoral students in the STEM disciplines (henceforth, doctoral scientists) represent human capital of the highest value—heralding 'a

ACADEMIA

KNOWLEDGE ECONOMY

Scientific purist	Social idealist	Pragmatist	Third-order capitalist
Identity	**Identity**	**Identity**	**Identity**
Traditional academic	Knowledge exchange	Transferable-skills Researcher	Applied knowledge
			Knowledge for profit
Basic knowledge	Co-production of knowledge	Basic and applied knowledge	Triple-helix university
'Ivory-tower'			
Agency & choice	**Agency & choice**	**Agency & choice**	**Agency & choice**
Publications	Social value	Value in/out academia	Value outside academia
Conferences	Social impact	Opportunistic	Entrepreneurial
Income	Third-sector collaboration	Wide-ranging collaborations	Industry experience and collaborations
Academic freedom			

Scientific purists

- Viewed academia as 'zero-sum' game

- Only one outcome – becoming an academic – was considered a success

- Information on doctoral career destinations ignored or dismissed!

- All efforts concentrated on the rules of the academic game

- Justified as low – rather than high – risk strategy

I want a career in research, and it would definitely still be in academia. I always wanted to stay in academic research.

I can't personally fathom how people do it – go from a PhD to private research. To me, a PhD is all about preparation for a career in academic research.

Sophia (Medicine)

Third-order capitalists

- Rejected the 'academic game'

- Embarked on the PhD with no intention of becoming an academic

- Sought cooperation with industry and external partners

- Critical of fellow PhDs, supervisors, academic conventions

- PhD as an economic investment – which was under regular review

[Academics] jump from one publication to the next... they don't ask hard questions; they just publish what they can. Nobody [in industry] actually cares. There's only about one person, among twelve PhD students, doing research that I think should ever see the light of day. My [former employer] does invite academics in to tell them what they're doing. I attended one of these... the academic in question was ten years out of date. He was asking for industry to help him, and they dismissed him because what he's doing is pointless.

Will (Engineering)

Pragmatists

- Started the PhD with a 'purist' outlook

- Shifted away from this, typically after year 1 – 'survival of the fittest'

- Shift to pragmatism prompted by a range of factors – individual and structural

- Pragmatism varied from passive ('hope for the best') to active ('prepare for the worst')

- Not an easy journey – articulated as an individual one

Since starting here I've actually changed what I thought my PhD was preparing me for. I used to think the PhD was preparing me for an academic career in science. I don't think that anymore. I think it's preparing me to be a researcher – someone who thinks scientifically and works scientifically. I think it's preparing me to do something much more industry based – having a set problem from a company and knowing I can solve it.

Daniel (Bioengineering)

Impact on career planning

- **Evident in all strategies**

  - PhD is a highly uncertain time – a time for decision-making and risk-taking

  - Seeking control over the future

  - Strategies responded to the knowledge economy *but:*

    - Understandings reduced to the binary of academic vs. non-academic

    - Only third-order capitalists were explicitly positive to the knowledge economy

- **All doctoral scientists wanted more career information, earlier - *but* sometimes rational 'facts' were ignored – <u>values matter</u>**

- **Strategies correlate with doctoral stage, subject and prior work experience**

Next steps

Much of doctoral employment in the UK remains unexplained

We need data that are genuinely longitudinal, systematically cover the characteristics known to affect access to higher study and employment outcomes, and are rich on decision-making and context.
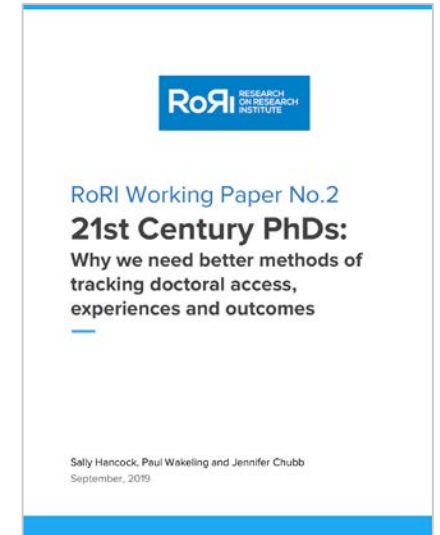
Changing employment conditions impact on the lived experiences of PhDs

There is appetite for more information, earlier on; but advice and guidance needs to be sensitive to disciplinary differences, individual values, and prior experiences. Personal stories are valued!

Both issues are connected: to enhance career support, we need better evidence

Multiple identities and choices are observed across doctoral researchers; identities are complex and may shift multiple times. We need to better understand motivations for PhD study.

References

Behle, H. (2016) Graduates in non-graduate occupations. Report to HEFCE and SRHE.

Britton, J., Dearden, L., Shephard, N., & Vignoles, A. (2016) How English domiciled graduate earnings vary with gender, institution attended, subject and socio-economic background. https://www.ifs.org.uk/uploads/publications/wps/wp201606.pdf

Department for Education (2017). Postgraduate Doctoral Loans: government consultation response. London: Department for Education.

Elias, P. and Purcell, K. (2013). Classifying graduate occupations for the knowledge society. FutureTrack, working paper 5.

Hancock, S., Hughes, G., & Walsh, E. (2017). Purist or pragmatist? UK doctoral scientists' moral positions on the knowledge economy. *Studies in Higher Education*, *42*(7)

Hancock, S. (2019). A future in the knowledge economy? Analysing the career strategies of doctoral scientists through the principles of game theory. Higher Education, 78(1), 33–49.

Hayter, C. and Parker, M. (2019). Factors that influence the transition of university postdocs to non-academic scientific careers: An exploratory study, Research Policy, 48(3), 556-570.

McAlpine, L., Amundsen, C., and Jazvac-Martek, M. (2010) Living and imagining academic careers. Perceptions of doctoral students and pre-tenure academics. In L. McAlpine & G. Akerlind (Eds.), Becoming an academic: International perspectives (pp. 125–154). London: Palgrave Macmillan.

McAlpine, L., & Emmioglu, E. (2015). Navigating Careers: Perceptions of Sciences Doctoral Students, Post-PhD Researchers and Pre-tenure academics. Studies in Higher Education, 40(10), 1770-85.

RCUK (2014) The Impact of Doctoral Careers. Retrieved from http://www.rcuk.ac.uk/documents/skills/timodcfullreport-pdf/

Skakni, I., del Carmen Calatrava Moreno, M., Corcelles Seuba, M., & McAlpine, L. (2019) Hanging tough: post-PhD researchers dealing with career uncertainty, Higher Education Research & Development: DOI: 10.1080/07294360.2019.1657806

Thank you

sally.hancock@york.ac.uk

@sallyehancock

UNIVERSITY
of York

FIFTH ANNUAL

King's College London

Researcher Education & Development CONFERENCE

October 18th 2019

http://bit.ly/REDS2019   #redsCONF2019   @REDSconf