

THE RESEARCH COLLECTIVE AS AN EMERGENT MODEL TO GROW RESEARCH CAREERS IN A TEACHING-LED ACADEMIC ENVIRONMENT.

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ABSTRACT

Newly appointed lecturers joining teaching-focussed environments can encounter significant challenges to sustain a successful research career. Some of these challenges pertain to the existing work culture and the suitability of mentoring. At the same time, success in academia is typically associated with the “academic super-hero” model where individuals are expected to achieve excellence on all fronts and in short timescales. Here, we offer a complementary model: the research collective. The research collective is defined as a self-formed group of researchers (irrespective of specialism) supporting each other and presenting themselves united when aiming to promote both their own research, and when promoting the value of research in their department, thereby creating around them an empowering proximate research culture. The advantages of this new model are outlined, and illustrated using the Earth, Ecology and Environment research collective, as an example. Key benefits are described in terms of: i. enhancing the proximal and institutional research culture, ii. promoting the image of the research collective’s members to the outside, and iii. ultimately enhancing the research career prospect of individuals. Additionally, we suggest actions

research administrators and other stakeholders within the university can take to support the development of research collectives.

Keywords

Research Group, Career Progression, Academic Collective, Research Culture, Promotion.

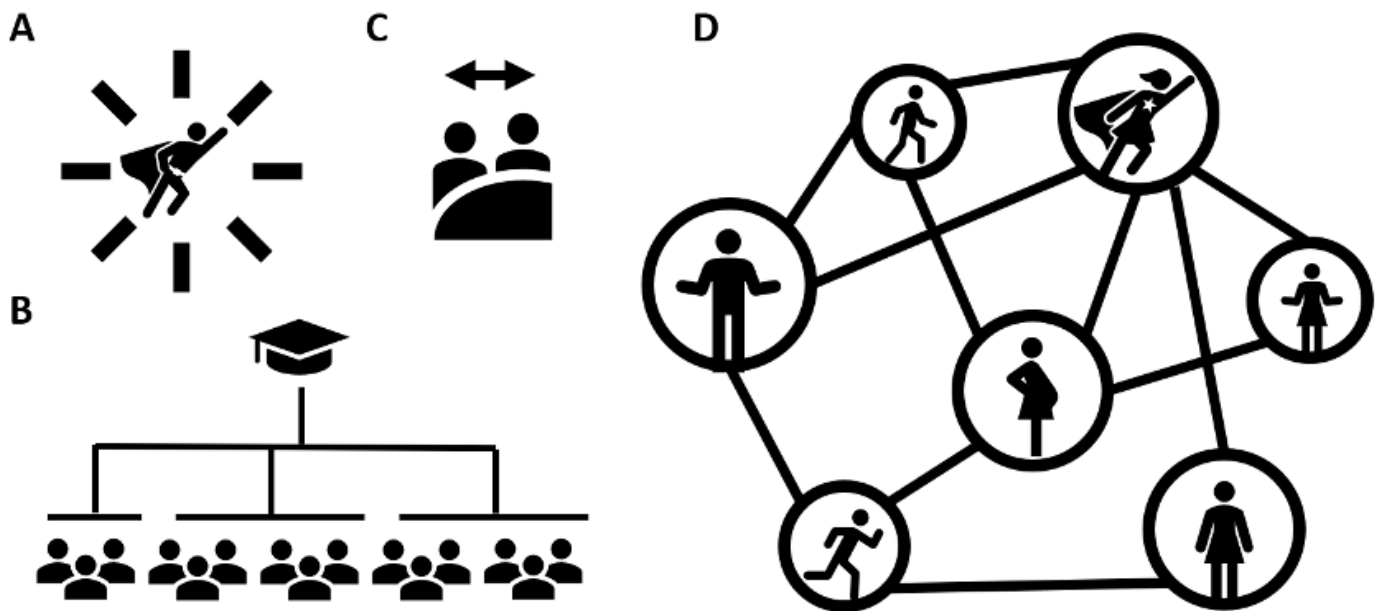
INTRODUCTION

Teaching-focussed universities, such as UK former polytechnics, aka post-1992 universities, increasingly aspire to develop their research activities (Birx et al., 2013; Wathey, 2022), with a focus on the associated income, prestige and improved ranking such as in the *Times Higher Education* (2023). Research is invested in by governments to fuel economic growth, and this strategy may be proving successful in areas having experienced economic depression as illustrated by Northumbria University, in the Northeast of England (Wathey, 2022). However, it can be difficult for an institution to establish itself in the competitive field of research, as this can require significant organisational changes, a work culture shift, as well as investments in new facilities and new hires (Birx et al., 2013; Huenneke et al., 2017; Nguyen et al., 2015).

Newly appointed lecturers in teaching-focussed environments represent an enormous potential for developing new research. Many of them join with a very positive attitude to developing their academic career, inclusive of teaching, research and a healthy work-life balance (Anonymous, 2018). At the same time, an existing work culture, strongly focussed on delivering excellent and large volumes of teaching (i.e. not inclusive of research), can impede, or slow down, institutional and individual efforts to establish successfully new research (Huenneke et al., 2017). Here, work culture is defined as the attitudes, behaviours, values, and models of success shared among staff at all levels (Royal Society, 2019; Wellcome Trust, 2020). Irrespective of the research environment, it is well-known that establishing fully functioning research groups can take years or even decades (Alon, 2010).

At the beginning of their tenure, new lecturers typically aim to become successful academics, success in this context being associated with the development of independent research, alongside teaching and administrative activities. Research success is often quantified via a variety of metrics including the quality and quantity of publication, income generation, number of Ph.D. completions, postdocs supervision, and eventually a list of successful lab alumni. To achieve this success, the main model available today is that of the “academic superhero” (Hay, 2017; Pitt & Mewburn, 2016) (Figure 1A), achieving excellence on all fronts and within a few years.

Figure 1
Models of departmental success, grouping and collaboration. A. the academic superhero model, B. Top-down formed research clusters, C. One-to-one mentorship from senior member of staff, and D. Research Collective.



In addition to the superhero model, for the purpose of departmental identity and image, e.g. to demonstrate an active research environment for the British Research Excellence Framework (UKRI, 2023), university departments may create research “clusters”, dividing staff into coherent subdisciplines. This latter model is often decided top-down because of the imperatives associated with the aims of such a group (Figure 1B). Often, these groupings can also be in response to policy and funding design, rather than the expertise of the individuals at the institutions.

Typically, neither the superhero nor the cluster models have career support embedded by design. Instead, formal or informal research-focussed mentoring (Figure 1C) tends to be critical for newly appointed lecturers, something well documented in the biomedical sciences (e.g., Diggs-Andrews et al., 2021) and beyond (Bland et al., 2009). This mentoring aims to retain early career researchers from diverse backgrounds, and coach them into an academic superhero. Through this path, they will typically achieve, successively, more confidence, recognition, productivity and sophistication in their research (Akerlind, 2007). However, mentoring relies on a strong and pre-existing research culture, often sustained by senior, established academics, such as professors. These established academics can be important sources of support to newcomers in their department, when navigating university funding systems, and issues around work-life balance.

PROBLEM STATEMENT

In teaching-focussed environments, there tends to be fewer internal superhero role models, fewer senior academics with a successful research career and, as a result, less-developed forms of formal or informal mentoring, as well as a less-developed research culture. Moreover, there may not be any relevant research cluster or groups of any making or function to welcome and support newly appointed lecturers and coach them into achieving research success. Significantly, the workload in teaching-focussed departments may be less focussed on securing time for research activities. An additional consideration is that not all new lecturers have the specialism, drive, aspiration and ability to develop research following the superhero model.

Despite these work-environment characteristics, to our knowledge, the superhero model tends to be the main existing model for lecturers, managers and research-support staff alike. However, for the reasons outlined above, in those circumstances, the superhero model may be unrealistic for some.

Concurrently, there is an increasing drive to make academia, research and researchers more diverse and more open, for which practical advice is increasingly available, for example when hiring (Ballah, 2019). Also, there are growing calls to transform the way research and researchers are assessed, with a move away from a sole focus on narrow indicators and metrics such as impact factors based on article citations (Declaration on Research Assessment, 2013; Kowaltowski et al., 2019). Altogether, these changes may also transform in the long term how research quality can be assessed and how individuals can become successful as researchers.

This piece proposes a model of academic research grouping, named here ‘research collective’, providing a complementary approach to the existing models of “superhero”, “top-down clusters” and mentoring schemes (Figure 1). The objectives of research collectives are typically i. to promote research within a department, ii. to promote the research activities of the members beyond the department and iii. to enhance the research career prospects of newly appointed lecturers in a teaching-focused environment. This paper is organised in three parts. Firstly, we provide detailed observations for one case study, the Earth, Ecology and Environment (EEE) research collective, Teesside University, UK. The observed benefits are presented in terms of proximal and institutional research culture, image to the outside and career prospects for individuals. Secondly, we define the research collective as an emerging concept and compare it to the existing models identified in the introduction (Figure 1). Importantly and thirdly, we synthesise the support that can be given to research collectives for them to achieve their aims, based on the lessons learned through our case study, before providing a conclusion.

OBSERVATION

Period, Frequency and Type of Activities

The activities were documented by the first author of this article between creation of the Earth, Ecology and Environment (EEE) research collective in December 2018 and June 2022. After June 2022, institutional efforts to reinforce support to research activities enabled the EEE to evolve into an official research cluster headed by an appointed senior academic. During the period of activity, the collective met on a fortnightly basis, either in person or using a videocall facility, irrespective of

the teaching academic year calendar (Table 1). The meetings were called by sending a recurring electronic meeting invitation using Microsoft Outlook software to any colleague expressing a desire to take part. During communications, there was a regular reminder on how to opt out. Some 91 research-collective meetings were scheduled to facilitate a variety of activities listed here with their frequency expressed in percent. A wider audience, such as the whole department was invited for some of the activities, but otherwise the invitations were only to those having expressed an interest in taking part to the research collective.

Table 1
Type of content discussed at the EEE research collective meetings.

Activity	Collective members only	%
Research-focussed informal networking	Yes	45.1
Meeting university professional services and departmental leadership	Yes	11.0
Research seminar from newly appointed lecturer	No	7.7
Networking with external partners	Yes	8.8
Agenda-structured discussions and co-working parties A	Yes	6.6
Peer delivered structured training	No	5.5
Collective AGM-like decision-making meeting	Yes	3.3
(Falling on holiday and/or not attended)		12.1

(A: e.g. making the most of internal funding opportunity, completing a section of the website, ...)

In addition to regular meetings, the method used to develop the EEE activities followed two aims. Firstly, to enhance the proximal research culture, which was implemented by: having measures to welcome new colleagues; gentle moderation of fortnightly meetings to ensure the focus remained on research; regularly scheduling relevant activity and inviting relevant guests as part of the fortnightly meetings; and securing time for free discussion. Secondly, to promote the image of the members beyond Teesside University, which was actioned through: a web presence; the creation of a logo; use of social media; and encouraging the members to use the research collective's name part of their affiliation, for example on email signature.

Enhancing the Proximal and Institutional Research Culture

Integral to the EEE were the measures in place to welcome new colleagues. They aimed to portray the new colleague as a researcher bringing valuable expertise to the department. Shortly after joining, the new member of staff was introduced to the department by email specifying their area of expertise. The new member of staff was invited to the collective's fortnightly meetings. These meetings provided opportunity to meet new colleagues, whilst also providing an informal setting to discuss research and develop an understanding of each other's specialism. They were also formally invited to present their research at a research seminar,

coinciding with one of the fortnightly meetings, with the brief to “present your research and research you are intending to develop at the University”. The whole department was typically invited to these research seminars and following the presentation, when inviting for questions, the audience was reminded to ask constructive questions that will help the new member of staff to grow their intended research at the University. These measures portrayed lecturers as researchers within the department, enabled networking and had the benefit of promoting a positive research culture within the department. They were run in addition and independently from standard university and departmental induction, and there was a sole accent on research activities, thus contributing to a work culture inclusive of research.

On the longer term, the regular fortnightly meetings were an opportunity for peer support. The meetings were designed as a safe place and secured a period of time where research concerns and opportunities could be discussed. During teaching term time, there was occasionally the need for a moderator to intervene and re-orient discussions towards research (instead of e.g. pressing teaching issues). The overarching discussion point during these meetings was how to develop one’s research while at the University. Key discussion points were as follows:

- Identifying research support within the university and invite professional services to meet our team and specialism. For example, this included the press office, research grant administrators, etc.
- Identify support that did not exist and communicate with departmental executive and others on how this could be provided. For example, the collective identified the lack of suitable mentoring and senior researcher for our specialism, and were able to communicate this need to the relevant stakeholders within the university
- Discussing priorities in our work, such as income generation, publication and outreach
- Discussing priorities in our work, in order to secure writing and research time
- Identify one’s research niche, learn how to communicate it with peers and others

- Discussing research idea to turn it into a realistic funding proposal
- Building research profile/collaborations
- Peer-support about life-work balance

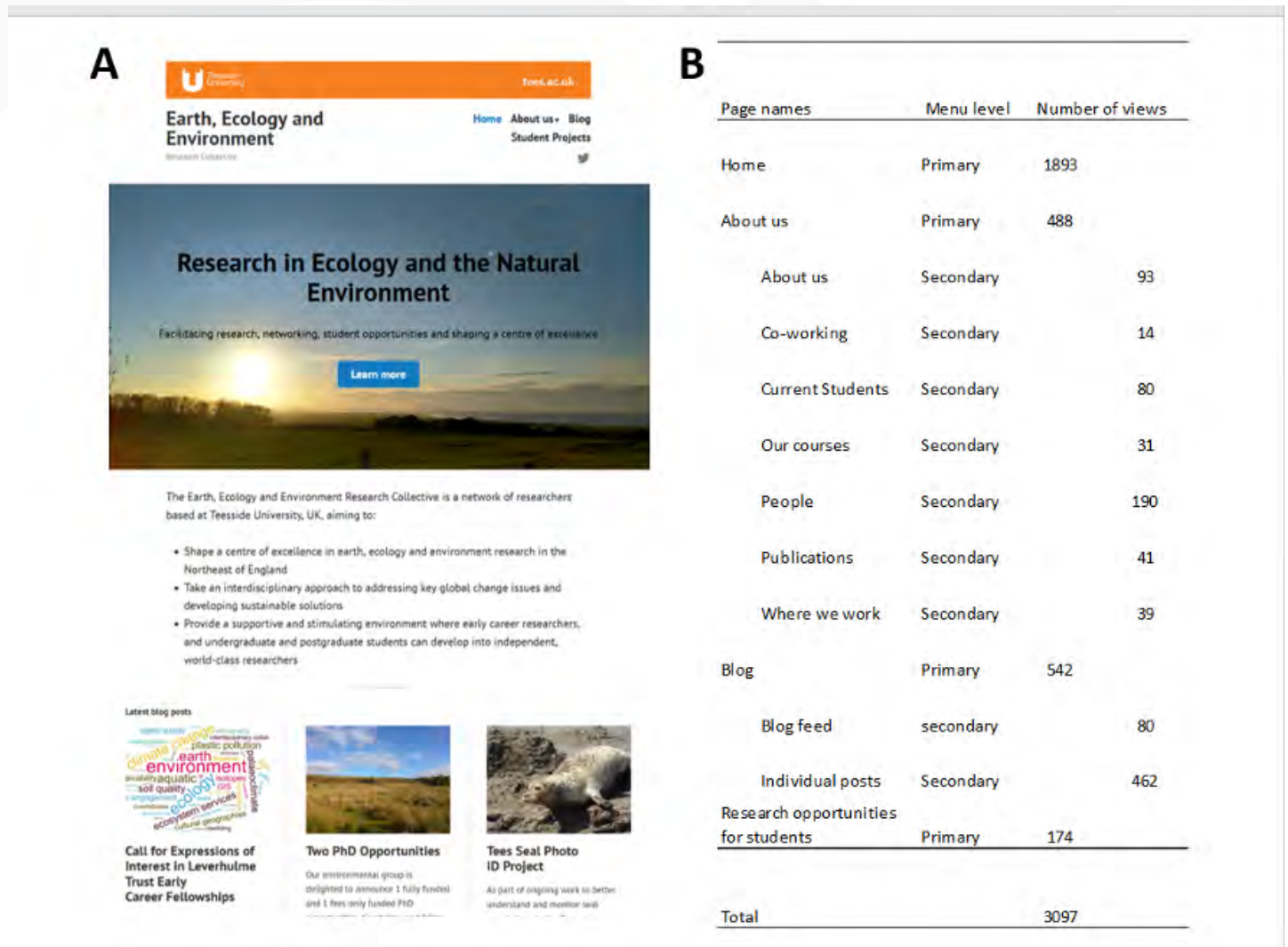
An additional unexpected benefit of the EEE research collective was to create peer-pressure to sustain a focus on developing research and the research career of the members. It also enabled members to keep sight of career targets and objectives by discussing them regularly with colleagues. This peer support and focus on targets are important outcomes of an effective research culture and was promoted within the research collective. This advantage became particularly important during the 2020 COVID pandemic, when offices and laboratories were closed. In addition, the collective promoted a very positive research environment within the group that prioritised collective/collaborative success (as opposed to individual success) and thus increased morale and productivity. Ultimately, this led to an enhancement of proximal and institutional research culture.

Promoting the Image of the Research Collective’s Members to the Outside

The EEE research collective was also an instrument for selling the research and/or consultancy services to potential partners outside the University. One key tool to represent the collective and its members was the development of a web presence, initially a page on the University’s research portal (<https://research.tees.ac.uk/>) and subsequently an extended independent website (Figure 2). In addition to playing an important role in promoting research activities (Luzon, 2017), research group websites can facilitate the construction of an academic identity (Luzon, 2018).

Figure 2

A. Home page of the website in Dec 2022 and B. Website pages and number of views for the whole duration of the website's existence (Sept 2020 to December 2022).



The final website's details about pages and architecture are included in Figure 2A. Website visitors came principally from the UK (60.2%) but also significantly from other countries such as the Netherlands, the US, Finland, Austria and France. The average number of views per visitor for the whole duration was 1.72. It is worth noting that the viewers of the home page (Figure 2B) were able to read the aims of the research collective (information reproduced on the "About us" page) as well as the title and an excerpt of the three latest blog posts (enabling them to reach out to one of the 35 individual

blog post pages directly without going through the blog page).

An important benefit of the collective in terms of promoting its research activities was the ability to demonstrate belonging to an active group of academics when approaching potential external collaborators. This brought additional credentials to staff-specific expertise as well as a sense of longer-term stability when considering collaboration. This would be particularly advantageous when a university is early in the

development of research or a specific field of activity. The fortnightly meetings were also an opportunity for potential external partners to reach out to all collective members and the variety of expertise represented. For example, collaboration with a local conservation NGO was initiated in this manner and began a research project about plastic pollution in rivers. Eventually, this facilitated the employment of a research assistant, the collection of a preliminary dataset, a publication and building a strong relationship with an important external partner. Being able to share and attract contact from industry was a significant benefit, especially of interests for newly appointed lecturers that may not have yet a full portfolio of external partners.

Enhancing the Research Career Prospects for Individuals

Enhancing the proximal research culture and promoting the activities of the collective's members inevitably contributes to improving research career success. This career support benefits those on an academic superhero trajectory, as well as to those adopting a broader definition of research success. Concretely, there may be opportunities arising directly from the collective that members take up and turn into a research career achievement. In addition, all active members of the collective can demonstrate credentials in developing the institution research culture, which can be a requisite for career progression.

Challenges in Starting and Sustaining a Research Collective

The development of the EEE as a research collective did not come without challenges. These pertained to conflicting workload priorities for members, the governance within the EEE, the interaction with other stakeholders within the University, and access to resources and support.

One major challenge encountered for all members of the EEE was that starting and sustaining the research collective required time and dedication. However, with retrospect this should be weighed against the benefits highlighted in this article, including an increasing focus and commitment to one's research activities, and peer support. Whether all members had a full return

on investment in time remains an open question and only rigorous interviews with members applying social science methods could elucidate this matter.

Linked to this challenge was that the EEE began without a specific model of governance within the EEE. This meant that decision making was based on a mixture of collegiate discussions and individual initiatives, often limited by time availability. For instance, 12.1% the meetings fell on holiday and/or were not attended, evidencing some of the challenges linked with time availability and governance (see Table 1).

An autonomous, self-declared and united group of colleagues can be perceived and mis-interpreted as a threat or a challenge, for example to departmental authority and to the existing work culture. The EEE attempted to pre-empt potential conflicts of this nature by having transparent aims (featuring the home page of the web presence, Figure 1). Also, representatives of university professional services and departmental leadership were invited to the fortnightly meetings, thereby avoiding any doubt about the intentions of the group.

Initially the EEE was not recognised as an official entity rendering executives, administrators, and support staff across the university reluctant to dedicate resources. Development of a web presence is a point in case. Because of hesitancy and lack of resources, the EEE eventually resorted to its member's skills and free resources outside the University to develop a website. A general scepticism from senior academics about the value of departmental blogging may also have been influential, although this has only been researched in depth in the medical sciences in the US (Cameron et al., 2016). However, free resources, blogging platforms and other social media are commonly used to promote academic research and build academic identity (Luzon, 2017, 2018). In time, the stakeholder engagement work within the University enabled EEE to access more support and resources.

Emergent Concept

A research collective is defined here as a self-formed group of researchers (irrespective of specialism) supporting each other and presenting themselves

united when aiming to promote their research, and to promote research in their department, thereby creating around them an empowering proximal research culture. Based on this definition, research collectives can be of variable sizes, integrate different disciplines, be administrated in various ways and evolve over time, to suit the members as their departmental (or institutional) environment changes. The ability to change in time, renders them agile and adaptable. What makes research collectives distinctive from other research groupings is the collegiality, the focus on research and only research, as well as a collaborative and constructive approach to promoting research. Typical objectives include providing peer support to members, creating a welcoming structure for new lecturers, offering an internal research representation, and offering representation of research activities to external partners.

As such, research collectives can contribute to developing the departmental research culture, and potentially fill temporary gaps in mentoring, role models, and any aspect difficult to create when a department transitions from a teaching-only focus to one inclusive of research. Importantly, they do not need to fill all gaps or compete with any existing structures. Crucially, research collectives provide an additional model for a more diverse range of researchers to thrive into, and to develop their career.

Research Collectives complement the pre-existing models of academic Special Interest Groups, and Research Interest Groups, that are becoming increasingly utilised. These existing types of academic groups typically focus on well-defined topics or problems and offer an opportunity for the members to exchange and apply knowhow that is specifically relevant to the focus of the group. As defined in this article, a research collective does not necessarily centre around a shared topic of common interest, but instead follows specific aims regarding research promotion. In addition, the research collective explicitly provides a model particularly suited for faculty members with research aspiration within teaching-focussed environments.

Recommendations for Research Administrators

Demes et al. (2019) provides comprehensive guidance for research administrators based on a detailed case

study where an institution actively induced and financed the creation of cross disciplinary research clusters. Some of this guidance also applies to self-forming collectives, providing research administrators have gotten a mandate to support or nurture bottom-up initiatives. Therefore, the first step for research administrators may be to secure such a mandate, and potentially to re-think how some of the research support is delivered (Scarpinato & Viviani, 2023). Moreover, there is a strong argument for universities and departments to welcome research collectives because of the potential benefits described here as well as those described by Demes et al. (2019). In addition, the resources required to support research collectives are likely to be relatively minimal because a hands-off approach can be expected from research administrators. Below we explore how research administrators can help address the four types of challenges identified, namely workload, governance within a research collective, relationship with stakeholders in the wider university and resources.

The collective model is of course only one model and other complementary approaches exist, such as that published by Huang and Brown (2019). They advocate the use of the social network theory to facilitate collaborations within universities focussing on three potential barriers: embracing differences across disciplines, avoiding imposed collaborations, and insuring effective team sizes. In addition to presenting successful narrative such as that of the EEE, some key guiding points to build research collectives can be found in the description of the methods implemented to create the EEE (see section 3: Observation). During the initial steps of a research collective there could be discussions about the potential structure, aspirations in terms of aims, action plan, and internal governance.

In terms of governance, the creation of research collectives can be suggested during discussions with newly appointed lecturers by highlighting the potential benefits described here: i.e. for the individual, their career and the development of a research culture in their new institution. It may be useful to encourage individuals to reflect on whether they think contributing to a research collective may be a good investment of their time given the likely benefits. Also, when there are grassroot initiatives to create research groups or

research networks, presenting the research collective model can help galvanise energies and help focus minds on the practical steps to achieve one’s aim. Research administrators can also serve as informal ‘soft’ accountability for a research collective to remain active and maintain the benefits of being so.

Stakeholders within the university can be an important source of support for research collectives, as experienced by the EEE’s throughout the duration of activity. For the interest of learning from the EEE case study, Table 2 compiles the various ways stakeholders within a university, including research administrators, can contribute to growing research collectives.

In addition, research administrators can redirect the collective to any existing support within the university that would respond to a need identified by the researchers. This could include ensuring that relevant

research funding and consultancy opportunities are being forwarded. As an example from the EEE, in 2022, in an effort to bring more support to research activities in the department, research clusters covering all represented specialisms were initiated, thereby effectively structuring and supporting research groups and recognising a range of research fields. The EEE therefore evolved into an Earth and Environment research cluster headed by a senior academic, reinforcing the support for research in this area within the University. More information can be accessed directly onto a new website that integrates all the relevant material already online on the EEE website (<https://blogs.tees.ac.uk/environment/>).

Table 2
The benefits and type of support for a research collective depending on the stakeholder.

Stakeholders	Benefits to stakeholder	Type of support
Taught students	<ul style="list-style-type: none"> Enhanced research opportunities Sense of belonging 	<ul style="list-style-type: none"> Taking up jobs and internships within the collective Contributing with own studies to ongoing research
Research students	<ul style="list-style-type: none"> Informal access to a range of specialism Informal access to career support Immersion in Research culture Feedback on preliminary results 	<ul style="list-style-type: none"> Taking part to meetings whenever invited to A forum to ask questions, whether topic specific or career orientated Presenting own work
Academic staff not members	<ul style="list-style-type: none"> An additional independent support resource available A novel model of academic success 	<ul style="list-style-type: none"> Joining Creating one’s own research collective with relevant colleagues
Members	<ul style="list-style-type: none"> As detailed in this paper 	<ul style="list-style-type: none"> Developing one’s research Sharing experience of developing one’s research Attending meetings Contributing proactively Offering and receiving gracefully support from others when facing adversity Promoting one’s collective in gentle and firm way

Stakeholders	Benefits to stakeholder	Type of support
Head of Department, Research managers and executives	<ul style="list-style-type: none"> • Provision of a think tank • Contribution to research culture • An ability to reach out to groups of researchers (instead of multiple individual researchers) • Potential stream for distribution of small funding 	<ul style="list-style-type: none"> • Taking advantage of collective energy and 'officialise' into fully supported research group • Nurturing other groups sitting alongside existing collectives • Encouraging the creation of research collective • Listening to wishes and connecting to existing services/ opportunities • Supporting with a small budget • Forwarding relevant opportunities
Support services	<ul style="list-style-type: none"> • An opportunity to speak to many people at once 	<ul style="list-style-type: none"> • Discussing the benefits of the research collective and highlighting other models • Inviting to reflect about potential return on investment of time when contributing to a research collective • Redirecting researchers to this article and other cited within • Offering to serve as soft accountability and fixing regular update meetings (e.g. 4 times a year) • Listening to wishes and redirecting to relevant stakeholders • Forwarding relevant opportunities • Suggesting discussions about the potential structure, aspirations in terms of aims, action plan, and internal governance

CONCLUSION

The aim of this article was to highlight an emergent research collective model to grow research careers in a teaching-led academic environment. We defined the research collective as a group of researchers supporting each other and presenting themselves united when aiming to promote their research. This also works to promote research in departments, thereby creating around them an empowering research culture. Based on this definition, a research collective can be of variable size, integrate different disciplines, be administrated in various ways and evolve over time, to suit the members as their departmental environment changes. The advantages of research collectives are illustrated using one example and include the following. Firstly, a research collective contributes to growing a research culture in the immediate environment of the collective members, as well as within the host university. Secondly, it contributes to developing a positive image, and to promoting the research expertise of the collective's members to all potential stakeholders outside of

the university. Thirdly, synergies between these two advantages have the potential to enhance the research career prospects for individuals, thereby enhancing the growth of research capacity within the university. Importantly, we highlight that all stakeholders within a university, from student to support staff and managers, have the opportunity to benefit from and support research collectives. While the research collective model has been developed with teaching-focused environments in mind, it is likely that the benefits will apply as well to other institutions, including research-led departments and research institutes. This may be particularly true when there is a large population of academics on short-term contract and who do not have access to classic mentoring. Altogether, research collectives aim towards a more effective and more sustainable use of common resources, such as career knowhow and the enormous potential of new members of staff.

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