



Legitimising creativity



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The life of the mind is a creative life, and a vibrant academic culture requires the creative sustainability of the university in addition to its financial sustainability. The university's intense focus on improving its relative market position in recent years has been hugely successful. Now we face the challenge of truly embodying the identity of the elite institution we have long aspired to be.

The transformation of the university from a mid-ranking to a top-ten institution has been achieved largely by implementing top-down strategies based on performance metrics. A transformational intellectual culture on the other hand derives from the grass roots. We argue that the university now needs to shift towards facilitating and enabling academic creativity, allowing ideas to flow up from individual researchers and groups, and we make recommendations as to how best to achieve this.

We will focus in large part on interdisciplinary and collaborative creativity, reflecting our roots in the MILES programme www.miles.surrey.ac.uk, an EPSRC Bridging the Gaps project to stimulate interdisciplinary research at Surrey. Creative insight involves the drawing of unexpected connections, and both interdisciplinarity and collaboration make those new connections more explicit and accessible: interdisciplinary collaboration has the potential to unlock creative discoveries quickly. Interdisciplinarity is also a key strength of the university, reflecting the diversity of our academic community.

Our report draws upon the findings of our research study 'The Creativity Observatory', which comprised a series of interviews and focus groups with academic researchers across a range of disciplines, reflecting on their own creative processes, both individual and collaborative, disciplinary and interdisciplinary.

The recommendations in this report are structured around three key factors which emerged as vital to academic creativity: leadership and culture; research training; and time and space. Quotes from our interviewees are given in italics. Our overarching recommendation is the following:

Recommendation 1:
The University should explicitly recognize and promote 'Creativity' as a core component of its research strategy.

Leadership and culture

Creative leadership is largely about getting out of the way. In interdisciplinary contexts especially, facilitation is perceived to be the most effective management style, with participants stressing the importance of listening and of coordinating activities across a research project.

I don't think these people [research leaders] should talk too much, to be honest. Not be too imposing but actually to be good listeners, and in listening being able to respond to what they're seeing and hearing.

Lack of hierarchy within the project and a sense of shared ownership were also seen as key to a creative group process.

...our roles are very flexible, so it helps again not to verticalise the relationship too much and have a sense really no one is anyone's boss, nobody's here to tell everyone else what to do.

It's that point where you feel that "it's now my project, and I've invested so much that if it wasn't for me it wouldn't run".

**Recommendation 2:
Leaders of interdisciplinary research should participate in training programmes designed to develop their facilitation skills and promote the role of flattened hierarchy in interdisciplinary engagement.**

Good working relationships are fundamental to collaborative creativity: there needs to be both a symbiosis and a sense of personal connection between the collaborators. Researchers must value collaboration and trust each other. These conditions are all dependent on interpersonal factors – a degree of friendship and mutual respect – which have to develop organically.

There is a certain amount of trust that you have to get into a scientific relationship as well. And trust I think is hard to establish without a certain amount of friendship as well...

**Recommendation 3:
New interdisciplinary collaborations in targeted areas should be initiated through collaborative workshops that allow team chemistry to develop naturally, rather than through top-down matchmaking.**

Active facilitation of research networks by dedicated support staff, not only during start-up, but on an ongoing basis, frees academics to concentrate on ideas.

...if you look at the MILES network that only works because you've got one person there doing all the bringing together, thinking... Coordinating, what we'll do, what's going to happen.

**Recommendation 4:
The University should establish a successor to the MILES programme to provide opportunities to learn about other disciplines, to promote the serendipitous development of new interdisciplinary collaborations at grass roots level, and to provide training for interdisciplinary research leaders and facilitators.**



Early career research training

If creativity is to be legitimised as a vital element of the academic life at Surrey, then philosophies and practices which encourage and enable creative work, and which train academics to recognise and develop their own creativity, need to be embedded in the training of new researchers.

It is a training of the mind. Whichever discipline it is, you're having your mind trained within that discipline. I don't think [academics in my discipline] would use it [the word 'creativity'] to describe their own work. Although it may be a kind of creative thinking that is going on.

Innovative research is founded on flexible and imaginative thinking, and so training for new researchers should focus not just on addressing the characteristic problems of specific disciplines, but also on developing researchers' capacity for generating ideas and thinking creatively.

Students really begin to appreciate that actually doing research isn't about solving problems, it's about sitting in the stuck place and thinking about "what does that tell me about this problem and the way in which I'm thinking?" so that I might think in a different way.

Recommendation 5:
The development of creative thinking should be incorporated as an explicit aim of undergraduate and postgraduate programmes.

Collaboration is a vital component of the creative process, and of the original research ideas which emerge from this process. This can operate informally, through discussion and the exchange of ideas, or through the formal structures of collaborative research projects. Doctoral students preparing for research careers would benefit greatly from training in how to collaborate effectively with other researchers.

For me a part of the teaching process is getting people to collaborate and learning from each other's experience, and I do believe that everybody gains from listening to each other's problems and the way they solve their own problems.

Recommendation 6:
Appropriate group-based postgraduate research training and supervision should be explored and promoted across all disciplines to counter intellectual isolation and to develop collaboration skills.



As well as needing training and support to help them collaborate with other academics in their own discipline, new researchers also need to be introduced, as early as possible, to the demands and opportunities of interdisciplinary research. Interdisciplinarity is a priority for many funding bodies, and, in the future, interdisciplinary collaboration will be an increasingly prominent element of the research culture of Surrey and of other institutions.

In addition to exploring what cross-disciplinary research is we can actually teach it from a younger age to develop the capacity in people to work in a much more expansive way, and bring in skills from different areas and integrate them.

So the process there is not letting your mind sit in boundaries, that you've got to be able to think of all the areas, and dealing with a PhD student, you know, working with her to get her to think in that way as well.



Recommendation 7:
Elements of interdisciplinary training should be incorporated into all postgraduate research programmes to equip students with the skills necessary for collaborative creativity and to prepare them for the increasing prevalence of interdisciplinarity in academia and beyond.

Time and Space

In addition to enabling and legitimising creativity at postgraduate level, the creative culture at Surrey could be strengthened by giving academics greater independence in designing undergraduate courses. A clearer focus on discussing and reflecting on ideas, rather than on developing specific skills or preparing for particular assessment tasks, would make for more creative and innovative content on undergraduate courses, and would also encourage students to think and work in more creative ways.

They take out the creativity of teaching, so they want to uniformise everything to avoid mistakes, which I could see the point of in some sense, but I completely disagree in an essential way precisely because they don't allow you to take your own creativity and point of view.

The sense of creativity and skills are being honed down too early into very functional outputs. So you're being engineered through the education system to be good at doing something that exists within a sort of job industry, but that whole sort of job programme is very rigid.

Recommendation 8:

Opportunities should be provided to enable undergraduate students to participate in collaborative research at the University.

Recommendation 9:

Academics designing and convening undergraduate and postgraduate taught courses should be given greater freedom to enable them to promote open-ended and flexible thinking.



Creativity needs time to focus on and engage with a project. There is a need to have

...a clear morning, to have a run up and actually get into the flow of it, and certainly for that bit of the process [have] a bit of quiet and stability...

Academics often remark on how difficult it is to find this kind of quality time.

I tend to push to create as much space as I can... I have to fight for it, and it does feel like that. I do fight for it.

A creative university needs to recognize the obstructions to clearing time to work creatively and to actively promote mechanisms that help to remove them. University, Faculty and Department policies on timetabling, sabbaticals and flexible working, for example, should be formulated to preserve continuous periods of time for creative thinking.

Recommendation 10:

University policies and practices should enable academics to spend connected periods of quality time on research projects.

Time is needed to explore new directions as well as to focus on specific objectives. This time may be spent on activities that do not have an immediate output. For example, in collaborative research areas time is needed to develop sufficient understanding of the language, concepts and processes that (potential) collaborators from other disciplines use to be able to communicate with them effectively. This may lead to periods of apparently lower productivity. Fear of the consequences of such periods should not deter people from exploring new directions.

Recommendation 11:

University policies and practices, including those relating to annual appraisals and promotion, should ensure that the pressure to meet short term targets does not prevent academics from investing time on potentially more creative and higher impact projects.



Creative work is inherently a social activity. Interaction between people drives creativity and validates its products.

The more people interact the more creative the human race will be... There's still, I think, no substitute... for actually sitting down in front of someone and talking over things.

...when we have a research group meeting everybody's involved in everybody's project. Ideas are generated...

So an environment that is conducive to creativity is a social environment and the university should seek to provide social spaces and unstructured time for staff interaction.

Recommendation 12:

University policies and practices should make available time and social space to enable diverse groups of academics to talk to each other, face-to-face, about current and future research.

Summary

Creativity is an area where Surrey has the potential to take a lead among universities. With the establishment of the ILLUME research centre in Psychology, the MILES programme and its promotion of creative interdisciplinary collaboration, the new Digital World Research Centre, the BA and MA degrees in Creative Writing, Digital and Performing Arts, and the new Liberal Arts and Sciences degree, there is already a core of activities with a strong explicit emphasis on creativity. We call upon the University senior management to support the implementation of our recommendations to promote the development of a truly creative and inspirational academic culture across the whole breadth of its academic activities.

Legitimising creativity: authors

Prof Rebecca Hoyle is the Director of the MILES programme. She applies mathematics to the life and social sciences, and researches interdisciplinary and collaborative creativity. Rebecca has performed stand-up comedy using her research as inspiration and this year appeared at the Edinburgh Fringe.

Dr Matthew Peacock is a Research Fellow in the Department of Psychology. He wrote his PhD on the creative processes of noted scientists and writers of fiction and is now looking at the role of creativity in interdisciplinary groups. He also writes his own fiction.

Prof Mark Roberts is a mathematician who explores interfaces between different areas of mathematics and between mathematics and other disciplines. He has also studied architecture and is intrigued by its resonances with mathematics. For the past five years Mark has been Head of the Department of Mathematics.

Dr Gregory Tate is a Lecturer in English Literature in the School of English and Languages. His research focuses on the links between literature, psychology, and science. He is one of the BBC/AHRC New Generation Thinkers for 2013.

Ellen Dowell is a creative public engagement with science practitioner and interdisciplinary facilitator. She is the curator of Einstein's Garden, the science, nature and environment area of the Green Man Festival, co-founded Qualia Theatre, a company making theatre inspired by science, and is the organiser of Bright Club Guildford, which brings research to life through stand-up comedy. Ellen is also the MILES Facilitator.

www.surrey.ac.uk/psychology/research/the_creativity_observatory.htm

www.miles.surrey.ac.uk

www.surrey.ac.uk/faqs/research/illuminate/

www.epsrc.ac.uk

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