

# Overview of Research

The research system experienced huge disruption and challenges in 2020 as a result of COVID-19 but came through the year demonstrating its importance and value as a strategic national resource. The establishment of a new government department combining tertiary education and research broke new ground. This overview summarises key developments in research, drawing on the contributions in this year's chapter.

## Introduction

I'm delighted to introduce the research chapter in this year's edition of *Ireland's Yearbook of Education* by Education Matters.

It is fair to say that the year in research has been dominated by two developments: the formation of a new department with responsibility for tertiary education and research, and the emergence of the Covid-19 pandemic, which has created unprecedented global disruption and challenges. I shall return to these themes shortly, but not before highlighting some other significant developments.

The Irish Research Council (IRC) launched its Strategic Plan 2020–2024 early in the year, and although Covid-19 was not yet on the national radar, the plan's emphasis on the development of expertise and excellent researchers across all disciplines means it remains as relevant in the 'new normal' as it did under the old. As well as beginnings, the year also marked some endings and the anticipation of next steps. Innovation 2020, the national R&D strategy, entered its final year of implementation, as did Horizon 2020.

## New department, new start

2020 heralded the creation of a new department that many stakeholders had been seeking for some time. After the new government was formed, it created the Department of Further and Higher Education, Research, Innovation and Science, combining elements of the previous Department of Education and Skills and Department of Business, Enterprise and Innovation. The move was widely welcomed in the research ecosystem on the basis that such a new department would give added impetus to the promotion of research and innovation, and the institutions that perform it, as key to Ireland's future. Dr Lisa Keating discusses the emergence of the new Department in her contribution to this chapter.

The new Minister, Simon Harris TD, was quick to reflect the importance of expertise and research



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in informing evidence-based decisions and strategy in confronting the Covid-19 crisis. It's fair to say that the research ecosystem is enjoying a higher profile politically, and indeed in the public realm, via the Minister's active social media and other communications. The Council chair and senior staff had an extremely engaging first meeting with the Minister, after which he tweeted:

*Thank you to @IrishResearch for meeting with me today. Brilliant discussion about power of research to transform our country economically & socially & opportunities of new Department to drive this agenda, develop a new national plan for research. Will need investment & focus.*

Roll on a few months, and Simon Harris's vision for the new Department had begun to take shape. In a keynote address at the Irish Universities Association (IUA) seminar on the role of universities for future skills and innovation, the Minister identified four pillars that would underpin the strategy of the Department: innovation, talent, internationalisation, and inclusion. Judging by the reaction on Twitter, these themes gained immediate traction and buy-in from around the system.

The IUA seminar also featured a hugely insightful presentation from Mike Beary, country director from Amazon Web Services, in which he spoke of the value of critical thinking to the business, and a belief that technology settings need to include 'non-tech' people from disciplines such as the humanities to enable critical appraisal.

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€29 million was secured by the Minister under Budget 2021 (in addition to funding for higher education and research in 2020; see below), to be invested to support researchers, build capacity, support Covid-19 research, and strengthen north-south research links. The review of the National Development Plan ('Review to Renew') will inform the evolution of investment for the longer term in higher education and research and across government.

### Covid-19 and enhanced collaboration

Research and innovation, like all other sectors, were seriously disrupted by Covid-19. But there is a strong sense that we have yet to quantify how variables like gender, disability, and the stage of a research career have impacted on individuals. Professor Anita Maguire reflects on early-career researchers in her contribution to the chapter. There is no doubt that the crisis has hit hard on some early-career researchers, particularly PhD candidates, whose projects were thrown into disarray by the shutdown of labs, archives, and other essential facilities.

The crisis will also generate new learnings and novel ways of working to take forward. The research system, including enterprise partners, demonstrated its value as a strategic national resource, providing expertise, facilities, and skilled personnel to help in the fight against the pandemic.

It has been a year of pulling together in the face of adversity – within individual teams and organisations, but also across organisations and

agencies. Collaboration between Ireland's research funders in response to the crisis has been very strong and continues to evolve. At an early stage, the Irish Research Council, Health Research Board (HRB), and Science Foundation Ireland (SFI) issued a joint statement designed to provide reassurance to the research community and to signal that flexibility would be the order of the day in how the agencies would work with awardees to navigate through the disruption.

Collaboration then moved up a gear in the form of rapid-response research calls, involving an IRC-HRB partnership and a partnership between SFI, Enterprise Ireland (EI), and the Investment Development Agency (IDA). It is an initiative of which the agencies can be collectively proud, considering the speed and agility shown in running the processes from conception to announcement of awards. So far, close to eighty projects have been approved, with a combined investment of €12 million.

At the time of writing, it is likely that further support for rapid-response research will be forthcoming before the end of 2020. The Covid-19 crisis has focused research funders on enhanced collaboration, and this will continue beyond the far side of this crisis.

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Research data – its management, availability, and use – is of major importance, and the pandemic provides a more-than-ample case study in this regard. As well as rapid-response research funding initiatives, research funders, including the European Commission, have taken steps to initiate and support accelerated measures to make data and evidence available that helps in the fight against Covid-19. Dr Patricia Clarke of the HRB provides a very useful update in this chapter on new initiatives in research data management.

Early in the crisis, the Irish Research Council decided to implement a request scheme for costed extensions on a case-by-case basis, with priority being given to early-career researchers finishing in the near term. This decision reflected the fact that the sizeable majority of the Council's awards are individual grants made to postgraduate and postdoctoral researchers. Scope for budget re-allocations, as would typically apply to large grants, is not a realistic option for smaller individual early-career awards.

After the new government was formed, and in recognition of the disruption to the research and innovation system caused by the pandemic, a very welcome fund of €47 million was made available to higher education institutions via the Higher Education Authority. This fund will be critical in ensuring that postgraduate and contract researchers will be supported in finishing out current projects and in transitioning to the next steps in their research trajectories. The alternative to this was the spectre of a research cohort with advanced knowledge and skills, people who are key to the future of research and innovation in its widest sense, being potentially cut adrift from the system.

## Research, policy, and strategy

The interplay of research, policy, and policymakers, and how this circle can be made virtuous, is again a significant theme in this year's research chapter. Mary Doyle, former senior civil servant, and Professor Sean Redmond of the University of Limerick explore this in their articles. The chapter also features contributions specifically addressing research for education policy.

Linking the research community and expertise with government departments and agencies, to enable evidence-based policymaking and decisions, is a key pillar of the Irish Research Council's strategic plan. The Council aims to support knowledge exchange and cross-fertilisation through both programmes and collaborative initiatives.

Programmes include New Foundations, COALESCE, and our ongoing postgraduate partnership schemes. Exposure of early-career researchers to the research-policy interface is important, as the system is training researchers for careers in the public and other 'external' sectors as well as in academia. The 2020 New Foundations programme greatly expanded its partnership strands, to include agencies such as Creative Ireland and the Department of Justice.

The Council is pleased to have opened the third COALESCE call in Q4 2020, with partners this year including the Department of Foreign Affairs and the Department of Agriculture, Food and the Marine. This year the COALESCE call includes an open interdisciplinary strand linked with national or global societal challenges. Beyond the pre-existing frameworks, namely Project Ireland National Strategic Outcomes and the Sustainable Development Goals, the context for the call has broadened to include the obvious Covid-19 challenge, the themes identified by government as it develops the National Economic Plan (not least Brexit), and the Shared Island initiative. The Council looks forward to supporting excellent interdisciplinary research projects with strong policy linkages under COALESCE 2020.

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Looking at collaborative initiatives, a second phase of work on Engaged Research, led by Campus Engage, has been completed under a partnership with the Council. Together with other research funders, we are looking forward to working with Campus Engage to develop further measures that bring about a widely engaged research system across disciplines and regions. In addition, the Council is pleased to be supporting a new Public and Patient Involvement network, led by the HRB. Engaged research, impact, and knowledge exchange are all closely related, and this year's chapter has excellent contributions from Liam Cleere of UCD and Dr Alison Campbell of Knowledge Transfer Ireland.

Engaging policymakers in developing the effectiveness of the interface between researchers and policy is a priority under an exciting new partnership with the Royal Irish Academy. A Research for Public Policy initiative will launch a number of seminars to consider what kind of architecture is needed in Ireland to cultivate a dynamic ecosystem for researchers and policymakers to work together.

This broad theme – that the research system is not simply the concern of one government department but in fact is a resource for and informed by the whole of government – will be a key driver for the next national strategy for research and innovation. The Council looks forward to engaging with the Department on the development of the new strategy, and to playing a key role in the ecosystem in its implementation.

### Conclusion

In conclusion, I would like to thank, on behalf of everyone involved in Education Matters, all the contributors to the research chapter. They have collectively provided much food for thought as we look towards 2021. It has been a year of immense challenges, but also a year in which the contribution of research and expertise has been particularly apparent.

The prospect of a vaccine on the horizon is cause for optimism, but at the same time it is clear that we have yet to grasp the full human cost of the pandemic. To look at the virus as an isolated incident and not further evidence of the broader impact of humanity's encroachment on and exploitation of the natural world would be myopic. Our greatest challenges lie ahead of us, and research and innovation will be more important than ever in successfully overcoming them.

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### Strawberry moon over Dunsink

A picture by Anthony Lynch of the full Strawberry moon rising over Dunsink Observatory in Dublin, June 2020.

Multiple shots stacked from a time stamp to show the change in colour and height as the moon rose that night.

